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SEPTEMBER 1983 NUMBER 469 -- Part II

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Solar-Geophysical Data comprehensive reports

Data for March 1983, & Miscellanea

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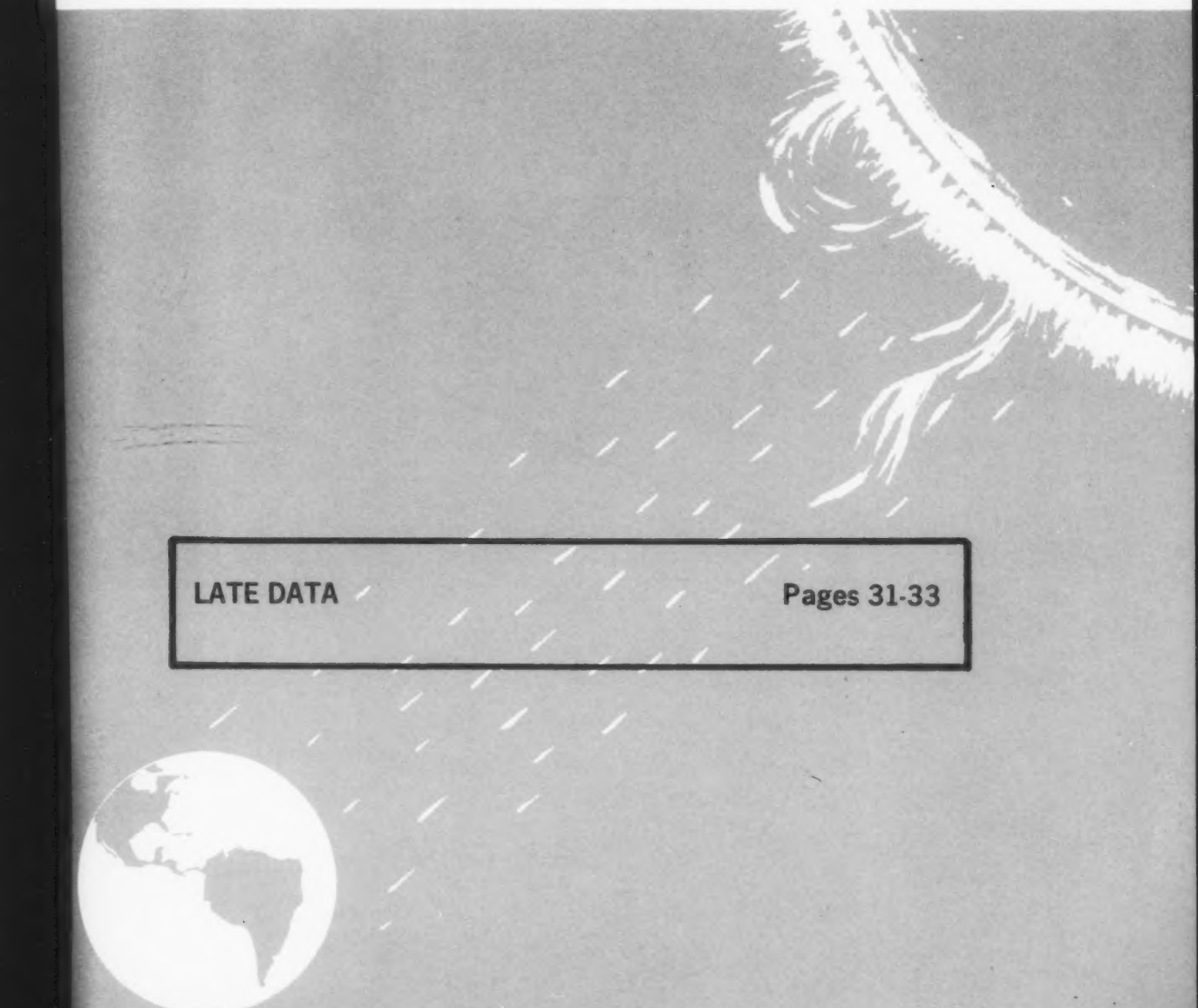

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Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 469 SEPTEMBER 1983

DATA FOR
MARCH 1983

Michael A. Chinnery, Director
NATIONAL GEOPHYSICAL DATA CENTER
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S O L A R - G E O P H Y S I C A L D A T A

NUMBER 469

(Issued in Two Parts)

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*Solar radio noise bursts observed at Athens, Learmonth, Manila, Palehua and Sagamore Hill during Aug 1979 through Oct 1980 appear in SOLAR-GEOPHYSICAL DATA, No. 461, Part II, pages 103-235.

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SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1983

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	204	IZMI	44	NS	0600.0E		360.0D	60.0			
	260	ONDR	44	NS	0752.0E		428.0D				
	245	SGMR	43	NS	1141.0	1247.1	630.0	130.0			QL=2 ST=2 TYP=1
	410	SGMR	43	NS	1141.0	1319.8	630.0	41.0			QL=2 ST=2 TYP=1
	200	HIRA	44	NS	2107.0E	0251.0	680.0D	10.0	5.0		WL
	100	HIRA	44	NS	2107.0E	2303.0	440.0D	70.0	15.0		ML
	410	LEAR	43	NS	2237.0	0257.5	718.0D	17.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2237.0	0624.5	718.0D	54.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		21.0		
	3750	TYKW	21	GRF	0009.0	0011.0	65.0	2.0	1.0		
	3750	TYKW	45	C	0024.0	0025.1	3.0	6.0	2.0		
	3750	TYKW	29	PBI	0027.0		20.0	1.0	0.5		
	2000	TYKW	45	C	0105.5	0106.3	2.5	16.0	2.0		
	3750	TYKW	45	C	0105.5	0106.3	2.5	20.0	3.0		
	1000	TYKW	45	C	0105.5	0107.1	2.0	36.0	12.0		
	245	LEAR	47	GB	0108.6	0108.6	.2	60.0			QL=6 ST=2 TYP=5
	610	LEAR	47	GB	0108.6	0108.6	.5	210.0			QL=6 ST=2 TYP=5
	610	PALE	47	GB	0108.6	0108.8	.5	360.0			QL=6 ST=2 TYP=5
	1000	TYKW	5	S	0108.7	0109.0	1.5	2.0	0.5		
	2000	TYKW	20	GRF	0145.0	0153.0	65.0	1.5	0.7		
	3750	TYKW	21	GRF	0145.0	0155.0	160.0	2.0	1.0		
	9400	TYKW	20	GRF	0210.0	0224.0	40.0	4.0	2.0		
	3750	TYKW	20	GRF	0212.0	0214.0	45.0	2.0	1.0		
	1000	TYKW	45	C	0224.4	0224.6	1.5	46.0	8.0		
	610	LEAR	8	S	0354.6	0355.3	1.4	23.0			QL=5 ST=2 TYP=3
	2840	PEKG	1	S	0713.0	0714.8	4.0	1.5	1.3		
	2950	GORK	1	S	0713.2	0715.0	2.2	5.2	2.6		
	15000	KISV	1	S	0713.5	0715.0	2.0	8.0			
	9395	PEKG	1	S	0714.0	0715.0	2.0	6.7	3.2		
	9100	GORK	1	S	0714.0	0715.0	2.0	13.0			
	1415	ATHN	8	S	0714.6	0714.6	.2	6.0			QL=5 ST=2 TYP=3
	4995	ATHN	8	S	0714.6	0715.1	1.0	6.0			QL=5 ST=2 TYP=3
	2950	GORK	1	S	0800.4	0800.6	.8	3.9	1.9		
	430	KRAK	8	S	0914.6	0914.7	.2	150.0			
	1470	POTS	4	S/F	0945.0	0945.5	2.0	15.0			
	6100	KISV	1	S	1044.3	1046.1	3.5	4.0			
	9100	GORK	1	S	1046.5	1046.7	.6	8.0			
	2950	GORK	1	S	1203.8	1204.5	1.8	6.6	3.3		
	1470	POTS	2	S/F	1226.5	1227.0	2.5	4.0			
	2950	GORK	1	S	1226.5	1227.0	2.5	6.6	3.3		
	3000	POTS	3	S	1226.5	1227.5	3.5	7.0			
	234	POTS	4	S/F	1246.3	1246.6	.3	220.0	20.0		
	536	ONDR	8	S	1319.3	1319.3	.6	49.0			
	430	KRAK	8	S	1319.7	1320.0	.5	29.0			
	2800	OTTA	240	R	1332.0	1343.0	11.0	3.0	2.0		
	2800	OTTA	8	S	1618.2	1618.2	.1	4.0			
	930	BORD	41	F	1654.3	1654.5	.4	30.0	2.0		
	9400	HUAN	1	S	1735.3	1736.2	2.4	4.1	2.3		0
	2800	OTTA	20	GRF	1939.0	2002.0	41.0D	2.6	1.4		
	2800	OTTA	21	GRF	2052.0	2113.0	130.0	9.0	4.3		
	9400	HUAN	22	GRF	2053.1	2123.6	59.3	17.8	8.8		L
	2800	OTTA	1	S	2054.0	2054.7	2.0	6.4	3.2		
	4995	PALE	8	S	2054.5	2054.6	.3	13.0			QL=6 ST=2 TYP=3
	8800	PALE	8	S	2054.5	2054.6	.3	13.0			QL=6 ST=2 TYP=3
	2800	OTTA	8	S	2105.0	2105.2	.3	5.6			
	1415	PALE	8	S	2105.3	2106.1	.8	30.0			QL=5 ST=2 TYP=3
	2800	OTTA	8	S	2105.9	2106.0	.5	2.6			
	610	SGMR	8	S	2107.3	2107.5	.5	47.0			QL=2 ST=2 TYP=3
	2800	OTTA	8	S	2112.0	2112.3	.7	8.6	2.8		
	610	PALE	8	S	2116.8	2117.0	2.0	19.0			QL=6 ST=2 TYP=3
	2000	TYKW	20	GRF	2201.0	2207.0	60.0	2.0	1.0		
	3750	TYKW	20	GRF	2204.0	2207.0	30.0	3.0	1.0		RAIN
	2000	TYKW	45	C	2312.3	2313.1	4.7	16.0	4.0		
	2695	PENT	3	S	2312.5	2313.0	1.5	21.0	9.0		
	3750	TYKW	5	S	2312.5	2313.0	1.5	16.0	4.0		
	2695	PALE	4	S/F	2312.6	2312.8	4.9	23.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	2312.6	2312.8	1.2	45.0			QL=6 ST=3 TYP=3
	610	PALE	8	S	2312.6	2313.1	.5	40.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	2312.7	2313.2	5.0	16.0	3.0		
	410	LEAR	47	GB	2312.8	2313.0	.5	89.0			QL=6 ST=3 TYP=5
	2695	LEAR	8	S	2312.8	2313.0	2.0	23.0			QL=6 ST=3 TYP=3

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1983

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
01	1415	LEAR	8	S	2312.8	2313.0	.3	16.0			QL=6 ST=3 TYP=3
	4995	LEAR	8	S	2312.8	2313.0	.3	9.0			QL=6 ST=3 TYP=3
	3750	TYKW	30	PBI	2314.0		20.0	2.0	1.0		
	2695	PENT	29	PBI	2314.0	2314.0	7.0	4.6	1.8		
	2000	TYKW	29	PBI	2317.0		20.0	1.5	0.5		
	3750	TYKW	5	S	2324.8	2325.3	1.5	4.0	1.0		
	2695	PENT	8	S	2324.9	2325.2	.8	2.0	1.0		
	610	LEAR	8	S	2325.1	2325.1	1.0	21.0			QL=6 ST=2 TYP=3
02	260	ONDR	44	NS	0750.0E	1045.0U	422.0D				
	245	LEAR	43	NS	2237.0	2248.8	717.0D	47.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		5.0		
	9400	TYKW	20	GRF	0133.0U	0143.0U	50.0U	5.0	2.0U		RAIN
	500	HIRA	20	GRF	0220.0	0305.0	66.0	10.0	4.0		SL
	3750	TYKW	20	GRF	0415.0	0423.0	40.0	1.5	0.5		
	245	LEAR	8	S	0421.5	0422.1	.8	28.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0421.8	0422.1	.5	9.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0422.0	0422.1	.3	24.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	0604.0	0620.0U	65.0U	2.0	1.0U		INTERFERENCE
	245	LEAR	8	S	0632.8	0633.6	1.8	19.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0633.0	0633.6	1.6	7.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0653.1	0653.1	.2	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0653.1	0653.1	.2	5.0			QL=6 ST=2 TYP=3
	3750	TYKW	5	S	0712.0	0713.6	3.0	5.0	2.0		
	3750	TYKW	29	PBI	0715.0		10.0	2.0	1.0		
	245	LEAR	8	S	0734.6	0734.8	.2	6.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0734.6	0734.8	.2	3.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0734.6	0734.8	.2	20.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0857.3	0857.5	.3	15.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0857.3	0857.5	.3	10.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0857.3	0857.5	.3	5.0			QL=6 ST=2 TYP=3
	808	ONDR	8	S	0940.5	0940.5	.2	6.0			
	2800	OTTA	27	RF	1547.0		63.0	2.2	1.9		
	2800	OTTA	24	R	1547.0	1551.0	4.0	2.2	1.1		
	2800	OTTA	24P	R	1551.0		49.0	2.2			
	2800	OTTA	26	FAL	1640.0	1650.0	10.0	-2.2	-1.1		
	9400	HUAN	20	GRF	1811.6	1815.3	11.1	5.6	2.1		0
	8800	PALE	49	GB	1921.1	1922.1	5.7	440.0			QL=5 ST=2 TYP=6
	2800	OTTA	20	GRF	2030.0	2110.0	70.0	2.4	1.7		
	3750	TYKW	5	S	2218.0	2223.0	25.0	2.0	1.0		
	3750	TYKW	20	GRF	2330.0	0010.0	125.0	3.0	1.5		
03	260	ONDR	44	NS	0807.0E		337.0D				
	208	VORO	44	NS	2300.0E		240.0D		0.0		
	3750	TYKW	20	GRF	0315.0	0326.0	60.0	2.0	1.0		
	2000	TYKW	20	GRF	0325.0	0340.0	55.0	1.0	0.5		
	2000	TYKW	20	GRF	0450.0	0506.0	65.0	1.5	0.7		
	3750	TYKW	20	GRF	0455.0	0504.0	60.0	1.5	0.7		
	2800	OTTA	1	S	1347.0	1348.5	8.0	2.2	1.1		
	930	BORD	46	C	1717.7	1718.0	.4	33.0	4.0		
	3750	TYKW	20	GRF	2345.0	2350.0	45.0	2.0	1.0		
04	204	IZMI	43	NS	0600.0		360.0	40.0			
	100	GORK	43	NS	0708.0		295.0D		10.0		
	200	HIRA	43	NS	0715.3	0739.3	75.0D	100.0	40.0		ML
	260	ONDR	44	NS	0800.0E		410.0D				
	127	TORN	44	NS	1300.0E		90.0D		8.0		V=0
	208	VORO	44	NS	2300.0E		240.0D		2.0		
	3750	TYKW	21	GRF	0130.0	0145.0	75.0	1.5	0.7		
	3750	TYKW	5	S	0228.0	0229.5	15.0	1.5	0.5		
	9400	TYKW	5	S	0630.5	0630.7	0.5	20.0	5.0		
	2000	TYKW	45	C	0700.0	0702.0	4.0	2.0	0.7		
	2000	TYKW	21	GRF	0700.0	0715.0	55.0	3.0	1.5		
	3750	TYKW	20	GRF	0700.0U	0717.0	70.0U	8.0	4.0		INTERFERENCE
	9400	TYKW	21	GRF	0700.0	0717.0	50.0	7.0	3.0		
	200	HIRA	45	C	0701.7	0702.5	2.1	11.0	7.0		0
	650	GORK	23	GRF	0704.3	0736.5	38.7	3.0			
	2000	TYKW	5	S	0704.7	0705.6	5.0	3.0	1.0		
	500	HIRA	7	C	0705.1	0706.0	17.0	15.0	4.0		WL
	650	GORK	4	S/F	0705.2	0706.2	1.3	20.0	10.0		
	650	GORK	40	F	0706.7	0713.2	10.4	9.0			

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04	234	POTS	27	RF	0712.0	0742.0	203.0	85.0	20.0		
	113	POTS	24	R	0718.0	0757.0	182.0	90.0	25.0		
	9400	TYKW	5	S	0718.5	0719.2	1.5	8.0	3.0		
	204	IZMI	24	R	0720.0		50.0	67.0	36.0		
	100	GORK	27	RF	0736.3	0746.9	38.0	65.0			
	650	GORK	20	GRF	0750.9	0833.0	65.1	4.0	2.0		
	6100	KISV	1	S	1040.4	1040.9	1.5	3.0			
	930	BORD	41	F	1132.0	1132.1	.4	14.0	2.0		
	2950	GORK	1	S	1139.8	1141.0	3.7	4.1	2.0		
	2800	OTTA	20	GRF	1905.0	1930.0	45.0	3.4	1.7		
	2800	OTTA	20	GRF	2055.0	2130.0	50.0	2.6	1.4		
	200	HIRA	42	SER	2156.0	2156.2	2.0	110.0			MR
	3750	TYKW	21	GRF	2245.0	2320.0	120.0	4.0	2.0		
	3750	TYKW	5	S	2343.0	2344.1	10.0	2.0	1.0		
05	260	ONDR	44	NS	0758.0E		367.0D				
	208	VORO	44	NS	2300.0E		240.0D		1.0		
	200	HIRA	42	SER	0054.0	0101.2	35.0	120.0			MR
	6100	KISV	1	S	0501.3	0502.0	2.0	3.0			
	200	HIRA	8	S	0523.0	0523.3	.5	64.0			MR
	200	HIRA	42	SER	0645.3	0724.0	45.0	190.0			MR
	650	GORK	21	GRF	0707.6	0927.0	163.4	6.0			
	650	GORK	4	S/F	0720.3	0722.3	4.0	107.0	19.0		
	15000	KISV	20	GRF	0720.5	0732.0	22.0	13.0			
	650	GORK	2	S/F	0727.8	0728.3	1.0	5.0	2.5		
	15000	KISV	1	S	0954.7	0954.9	2.0	9.0			
	2950	GORK	1	S	1003.5	1004.0	5.3	2.8	1.4		
	536	ONDR	42	SER	1113.0	1113.7	2.5	36.0			
	430	KRAK	42	SER	1220.5	1346.5	95.0	35.0			
	536	ONDR	1	S	1250.2	1250.5	1.2	7.0	5.0		
	234	POTS	4	S/F	1304.4	1304.4	.3	165.0	30.0		
	536	ONDR	8	S	1327.5	1327.6	.3	25.0			
	2800	OTTA	21	GRF	1425.0	1600.0	115.0	4.6	2.3		
	2800	OTTA	8	S	1544.2	1544.3	.3	2.8			
[	33	UPIC	46	C	1554.4	1558.2	5.8				
[	29	UPIC	45	C	1554.7U	1558.1	4.0U				
	2800	OTTA	8	S	1557.3	1557.6	.7	3.2	1.6		
	9400	HUAN	22	GRF	1752.3	1820.4	64.3	6.5	4.0		L
	2800	OTTA	1	S	1833.0	1834.5	6.0	2.8	1.0		
	1000	TYKW	5	S	2345.5	2345.7	2.5	2.0	0.7		
06	208	VORO	43	NS	0125.0		95.0D		5.0		
	260	ONDR	44	NS	0814.0E		387.0D				
[	100	HIRA	44	NS	2102.0E	2245.0	260.0D	45.0	20.0		
[	200	HIRA	44	NS	2102.0E	2300.0	260.0D	45.0	15.0		MR
	3750	TYKW	5	S	0008.0	0018.0	20.0	1.5	0.7		
	3750	TYKW	20	GRF	0045.0	0130.0	115.0	2.0	1.0		
[	3750	TYKW	31	ABS	0245.0	0308.0	45.0	-3.0	-1.5		
[	9400	TYKW	32	ABS	0245.0	0308.0	65.0	-3.0	-1.5		
	200	HIRA	41	F	0300.0	0333.0	48.0	98.0			MR
	1000	TYKW	45	C	0322.7	0323.1	0.8	6.0	1.5		
	200	HIRA	42	SER	0352.3	0352.4	3.0	130.0			O
┌	6100	KISV	28	PRE	0707.3	0719.7	13.0	3.0			
├	2902	YUNN	4	S/F	0716.0	0722.5	9.0	114.0			
├	2950	GORK	21	GRF	0716.0	0728.1	74.0	9.3			
├	9395	PEKG	21	GRF	0719.5	0735.0	32.0	9.3	2.9		
├	9400	TYKW	21	GRF	0720.0	0735.0	50.0	8.0	4.0		
├	6100	KISV	4	S/F	0720.2	0722.1	4.0	25.0			
└	9100	GORK	20	GRF	0720.3	0722.3	32.4	18.0			
├	3100	BERN	4	S/F	0720.5	0722.0	8.0	69.0			OPR
├	9400	TYKW	5	S	0720.5	0722.3	5.0	12.0	4.0		
├	5200	BERN	4	S/F	0720.5	0722.3	8.0	46.0			OPR
├	3750	TYKW	45	C	0720.5	0722.5	4.5	35.0	9.0		
├	1470	POTS	4	S/F	0720.5	0722.6	3.8	86.0			
├	1000	TYKW	45	C	0720.5	0722.6	8.5	97.0	10.0		
├	2000	TYKW	45	C	0720.5	0722.7	4.5	101.0	14.0		
├	500	HIRA	45	C	0720.6	0721.6	4.0	400.0	50.0		WL
├	2650	DWIN	2	S/F	0721.0	0721.0	1.0	20.0	10.0		
├	3000	POTS	4	S/F	0721.0	0722.3	3.5	38.0			
├	3653	YUNN	5	S	0721.0	0722.7	6.0	30.0			
▼	200	HIRA	46	C	0721.3	0722.3	2.0	840.0	74.0		O

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06	2950	GORK	4	S/F	0721.4	0722.3	1.7	35.0			
	234	POTS	4	S/F	0721.5	0722.1	1.7	250.0	50.0		III/V
	204	IZMI	45	C	0721.5	0722.3	3.0	1000.0	300.0		
	9395	PEKG	1	S	0721.5	0722.5	1.0	5.5	2.0		
	100	HIRA	46	C	0721.6	0722.3	2.4	79.0	25.0		SR
	3000	IZMI	5	S	0722.0	0722.8	2.0	47.0	33.0		
	6100	KISV	29	PBI	0724.5	0724.5	28.0	7.0			
	2000	TYKW	30	PBI	0725.0		35.0	4.0	2.0		
	3750	TYKW	30	PBI	0725.0		35.0	4.0	2.0		
	6100	KISV	20	GRF	0725.0	0732.0	18.5	3.0			
	204	IZMI	41	F	0726.3		3.0	160.0			
	200	HIRA	46	C	0726.5	0727.6	20.0	56.0	8.0		0
	200	HIRA			0726.5	0734.7		17.0			0
	3750	TYKW	45	C	0727.0	0728.2	2.0	3.0	1.0		
	2000	TYKW	45	C	0727.5	0728.2	2.0	3.0	1.0		
	204	IZMI	20	GRF	0731.0	0735.0	15.0	15.0	1.0		
	430	KRAK	8	S	1052.5	1052.5	.1	25.0			
	9400	HUAN	20	GRF	1619.8	1633.0	28.0	5.5	1.6		0
	2800	OTTA	20	GRF	1930.0	1955.0	75.0	2.0	1.0		
07	200	HIRA	43	NS	0315.0	0735.0	310.0D	60.0	10.0		0
	204	IZMI	44	NS	0600.0E		360.0D	100.0			
	100	GORK	43	NS	0724.0		76.0		10.0		
	430	KRAK	44	NS	0743.0E	0752.2	53.0D	60.0	42.0		
	260	ONDR	44	NS	0750.0E		428.0D				
	430	KRAK	44	NS	1050.5E	1240.0	140.0D	57.0	17.0		
	245	SGMR	43	NS	1131.0	1224.1	647.0D	130.0			QL=2 ST=2 TYP=1
	245	PALE	43	NS	2033.3	2335.5	466.7	180.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2239.0	2353.1	711.0D	110.0			QL=6 ST=2 TYP=1
	200	HIRA	43	NS	2256.0	0020.0	220.0	17.0	12.0		0
	208	VORO	44	NS	2300.0E		240.0D		10.0		
	3750	TYKW	5	S	0004.0	0016.0	25.0	2.0	1.0		
	3750	TYKW	20	GRF	0040.0	0057.0	50.0	2.0	1.0		
	500	HIRA	22	GRF	0636.0	0800.0	112.0D	15.0	8.0		SR
	650	GORK	22	GRF	0648.4E	0716.5	239.6D	8.0			
	950	GORK	21	GRF	0720.2	0804.0	458.3	45.0			
	950	GORK	4	S/F	0721.0	0722.1	3.3	109.0			
	950	GORK	2	S/F	0726.3	0726.4	.6	7.0			
	234	POTS	42	SER	1020.3	1028.6	8.5	470.0	1.0		
	234	POTS	42	SER	1126.4	1138.3	13.0	350.0	1.0		
	536	ONDR	27	RF	1150.0	1233.5	80.0	17.0	12.0		
	500	HIRA	22	GRF	2253.0	0006.6	137.0	15.0	7.0		MR
	3750	TYKW	21	GRF	2315.0	2337.0	95.0	2.0	1.0		
	3750	TYKW	5	S	2347.5	2348.6	2.5	1.5	0.5		
	1000	TYKW	45	C	2347.8	2348.5	2.5	20.0	2.0		
	610	LEAR	8	S	2348.0	2348.1	.8	62.0			QL=5 ST=2 TYP=3
	610	PALE	47	GB	2348.6	2348.6	.2	70.0			QL=6 ST=2 TYP=5
08	260	ONDR	44	NS	0807.0E		413.0D				
	204	IZMI	43	NS	0950.0		130.0	20.0			
	245	SGMR	43	NS	1129.0	1528.6	650.0D	66.0			QL=2 ST=2 TYP=1
	127	TORN	44	NS	1140.0E	1300.8	200.0D	20.0			V=1
	245	PALE	43	NS	1739.0	1752.1	629.0D	200.0			QL=6 ST=2 TYP=1
	200	HIRA	44	NS	2058.0E	0728.0	700.0D	40.0	20.0		ML
	245	LEAR	43	NS	2240.0	0842.1	709.0D	119.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		5.0		
	3750	TYKW	5	S	0005.0	0009.7	6.0	5.0	2.0		
	3750	TYKW	29	PBI	0011.0		17.0	3.0	1.5		
	1000	TYKW	45	C	0118.5	0120.2	3.5	26.0	4.0		
	3750	TYKW	21	GRF	0140.0	0157.0	70.0	1.5	0.7		
	3750	TYKW	5	S	0206.5	0208.1	2.5	4.0	1.5		
	2000	TYKW	5	S	0207.0	0207.8	10.0	2.0	1.0		
	2840	PEKG	20	GRF	0207.0	0207.8	12.0	6.0	4.3		
	3750	TYKW	29	PBI	0209.0		20.0	1.0	0.5		
	610	LEAR	8	S	0408.5	0409.0	1.3	28.0			QL=5 ST=2 TYP=3
	3750	TYKW	5	S	0453.0	0454.7	6.0	12.0	4.0		
	2840	PEKG	5	S	0453.0	0454.9	14.0	9.3	4.0		
	2000	TYKW	5	S	0454.0	0454.8	2.0	1.5	0.5		
	3750	TYKW	30	PBI	0459.0		65.0	2.0	1.0		
	410	LEAR	8	S	0517.6	0517.8	.2	11.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0519.3	0520.3	1.0	10.0			QL=6 ST=2 TYP=3

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08	410	LEAR	8	S	0522.6	0522.8	.2	15.0			QL=6 ST=2 TYP=3
	2000	TYKW	45	C	0550.0	0551.6	3.0	7.0	1.5		
	650	GORK	4	S/F	0550.7	0551.7	5.0	62.0			
	245	LEAR	8	S	0550.8	0551.0	1.2	17.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0551.0	0551.8	2.0	18.0	2.0		
	610	LEAR	47	GB	0551.1	0551.3	.5	66.0			QL=6 ST=2 TYP=5
	2695	LEAR	8	S	0551.1	0551.6	.7	13.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	0551.2	0551.7	2.5	25.0	1.5		
	2000	TYKW	29	PBI	0553.0		10.0	1.0	0.5		
	410	LEAR	8	S	0719.3	0719.3	.2	37.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0719.3	0719.3	.2	4.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0719.3	0719.3	.2	3.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0719.3	0719.3	.2	15.0			QL=6 ST=2 TYP=3
	2950	GORK	1	S	0723.3	0724.5	2.7	2.7	1.5		
	245	LEAR	8	S	0814.3	0814.5	.3	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0814.3	0814.5	.3	7.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0814.3	0814.5	.3	5.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0830.6	0830.8	.2	13.0			QL=6 ST=3 TYP=3
	536	ONDR	46	C	0846.0	0847.5	2.5	25.0			
	610	LEAR	8	S	0846.8	0847.0	1.0	16.0			QL=6 ST=2 TYP=3
	650	GORK	4	S/F	0846.9	0847.0	1.1	8.0			
	2950	GORK	2	S/F	0847.4	0849.5	3.5	9.5			
	410	LEAR	8	S	0847.6	0847.6	.2	10.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0847.7	0847.7	.2	26.0			
	3000	POTS	3	S	0849.0	0849.5	1.0	9.0			
	2695	LEAR	8	S	0849.0	0849.5	1.0	10.0			QL=6 ST=2 TYP=3
	650	GORK	4	S/F	1112.3	1113.0	1.8	30.0	9.0		
	1470	POTS	1	S	1113.0	1113.7	1.5	2.0			
	3000	POTS	1	S	1113.2	1113.5	1.3	6.0			
	2950	GORK	2	S/F	1113.3	1113.7	6.8	5.5			
	810	KRAK	8	S	1114.5	1114.5	.1	17.0			
	930	BORD	41	F	1115.4	1115.5	.3	26.0	2.0		
	930	BORD	41	F	1141.4	1142.2	1.4	15.0	2.0		
	2800	OTTA	2	S/F	1351.0	1352.2	3.0	5.2			
	930	BORD	8	S	1351.5	1351.5	.2	25.0	2.0		
	245	SGMR	49	GB	1510.6	1511.1	.7	7400.0			QL=2 ST=2 TYP=6
	2800	OTTA	21	GRF	1540.0	1555.0	30.0	2.8	1.6		
	2800	OTTA	2	S/F	1543.0	1543.8	1.0	2.6	1.3		
	2800	OTTA	20	GRF	1645.0	1710.0	60.0	2.8	1.4		
	2800	OTTA	21	GRF	1825.0	1839.0	35.0	3.6	1.5		
	2800	OTTA	1	S	1825.5	1826.1	2.5	2.6	1.4		
	2800	OTTA	21	GRF	1910.0	1936.0	90.0	2.2	1.1		
	2800	OTTA	8	S	1913.0	1913.2	.3	2.2	1.1		
	2800	OTTA	20	GRF	1954.0	1955.0	12.0	2.8	1.4		
	2800	OTTA	21	GRF	2110.0	2150.0	155.0	2.8	2.0		
	2800	OTTA	1	S	2140.5	2141.2	1.5	2.0	1.0		
	200	HIRA	46	C	2140.8	2141.2	1.0	980.0	215.0		0
	245	SGMR	47	GB	2141.1	2141.3	.5	390.0			QL=2 ST=3 TYP=5
	410	SGMR	8	S	2141.3	2141.3	.3	42.0			QL=6 ST=2 TYP=3
	245	PALE	49	GB	2141.3	2141.6	1.0	1000.0			QL=6 ST=2 TYP=6
	410	PALE	47	GB	2141.6	2141.8	.5	71.0			QL=6 ST=2 TYP=5
	3750	TYKW	21	GRF	2305.0	2357.0	225.0	3.0	1.5		
	245	LEAR	8	S	2305.5	2305.6	.1	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2306.8	2306.8	.3	27.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	2306.8	2306.8	.2	10.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	2306.8	2306.8	.2	6.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	2343.8	2344.0	.3	4.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	2343.8	2344.1	.5	61.0			QL=6 ST=2 TYP=5
09	100	HIRA	43	NS	0319.0	0623.0	320.0D	50.0	25.0		ML
	100	GORK	44	NS	0454.0E		426.0D		10.0		
	204	IZMI	44	NS	0600.0E		360.0D	70.0			
	410	LEAR	43	NS	0631.8	0856.3	237.2D	22.0			QL=6 ST=2 TYP=1
	127	TORN	44	NS	0700.0E	0838.9	480.0D	870.0	62.0		V=1
	260	ONDR	44	NS	0803.0E		427.0D				
	430	KRAK	44	NS	1045.0E	1240.0	205.0D	17.0	4.0		
	245	SGMR	43	NS	1127.0	1905.8	654.0D	189.0			QL=2 ST=2 TYP=1
	245	PALE	43	NS	1708.0	2111.8	662.0D	340.0			QL=6 ST=3 TYP=1
	200	HIRA	44	NS	2057.0E	0010.0	700.0D	25.0	8.0		ML
	100	HIRA	44	NS	2057.0E	0018.0	700.0D	130.0	20.0		SL
	245	LEAR	43	NS	2240.0	0049.1	708.0D	200.0			QL=6 ST=2 TYP=1

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
09	208	VORO	44	NS	2300.0E		240.0D		7.0		
	3750	TYKW	45	C	0008.0	0011.3	7.0	15.0	7.0		
	2000	TYKW	45	C	0010.0	0013.7	8.0	9.0	5.0		
	9400	TYKW	21	GRF	0010.0	0016.0	65.0	5.0	2.5		
	4995	LEAR	8	S	0010.1	0011.3	1.7	17.0			QL=6 ST=3 TYP=3
	2695	PENT	45	C	0010.2	0011.3	7.8	11.6	5.8		
	2695	LEAR	4	S/F	0010.3	0011.5	4.2	11.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0010.6	0011.5	1.0	13.0			QL=6 ST=3 TYP=3
	4995	LEAR	8	S	0011.1	0011.3	.7	17.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0011.3	0011.5	.3	13.0			QL=6 ST=2 TYP=3
	9400	TYKW	5	S	0011.3	0011.6	0.7	3.0	1.0		
	4995	PALE	8	S	0011.3	0011.8	.8	15.0			QL=6 ST=2 TYP=3
	3750	TYKW	30	PBI	0015.0		150.0	6.0	2.5		
	2000	TYKW	30	PBI	0018.0		160.0	3.0	1.5		
	2695	PENT	29	PBI	0018.0	0018.0	20.0D	2.8			
	3750	TYKW	45	C	0025.5	0026.4	3.0	2.5	0.7		
	3750	TYKW	5	S	0047.5	0049.3	14.0	2.0	1.0		
	2000	TYKW	5	S	0048.0	0049.0	10.0	2.0	0.7		
	3750	TYKW	21	GRF	0138.0	0150.0	65.0	1.5	0.7		
	3750	TYKW	5	S	0225.5	0226.2	9.0	1.5	0.5		
	410	LEAR	8	S	0619.0	0619.3	.6	17.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0724.0	0724.0	.1	11.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0724.0	0724.0	.1	51.0			QL=6 ST=2 TYP=5
	1415	LEAR	8	S	0724.0	0724.0	.1	8.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0724.0	0724.0	.1	18.0			QL=6 ST=2 TYP=3
	2950	GORK	1	S	0752.8	0754.0	2.2	2.0	.1		
	650	GORK	23	GRF	0828.8	0844.5	62.0	3.0			
	113	POTS	4	S/F	0836.5	0838.6	3.7	1300.0	200.0		III
	100	GORK			0837.2		3.0	110.0D			
	29	UPIC	4	S/F	0837.9	0838.9	1.4				
	950	GORK	1	S	0837.9	0839.0	1.8	9.0			
	610	LEAR	8	S	0838.0	0838.0	.1	5.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0838.0	0838.0	.1	9.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0838.0	0838.1	.3	110.0			QL=6 ST=2 TYP=5
	33	UPIC	4	S/F	0838.5	0838.6	.6				
	650	GORK	2	S/F	0838.6	0838.7	.6	6.0			
	650	GORK	21	GRF	0947.4	0955.9	29.6	5.0			
	950	GORK	45	C	0947.5	0947.7	.4	4.5			
	1470	POTS	42	SER	0947.5	0947.8	3.0	6.5			
	950	GORK			0947.5	0949.9		4.5			
	650	GORK	1	S	0949.6	0949.9	.9	3.0			
	2950	GORK	1	S	0951.9	0952.3	2.0	3.4	1.5		
	810	KRAK	1	S	1004.3	1004.6	.6	7.0	3.0		
	536	ONDR	28	PRE	1046.0	1100.5	19.0	13.0			
	930	BORD	42	SER	1053.0	1143.8	62.0	256.0	13.0		
	1470	POTS	45	C	1056.0	1105.7	57.0	96.0			
	810	KRAK	42	SER	1056.0	1106.8	28.0	41.0			
	950	GORK	40	F	1056.1	1107.0	27.6	65.0			
	650	GORK	23	GRF	1056.2E	1101.2	27.8D	20.0			
	808	ONDR	46	C	1057.0	1107.5	13.0	32.0			
	430	KRAK	45	C	1104.5	1107.7	4.0	51.0	18.0		
	650	GORK	41	F	1104.6	1106.0	18.1	57.0			
	650	GORK			1104.6	1107.1		85.0			
	536	ONDR	46	C	1105.0	1107.5	5.0	38.0			
	536	ONDR	29	PBI	1110.0	1111.0	14.5	10.0			
	808	ONDR	29	PBI	1110.0	1113.0	14.0	15.0			
	536	ONDR	46	C	1133.0	1143.5	13.0	43.0			
	650	GORK	23	GRF	1133.3		22.0	2.0			
	950	GORK	46	C	1133.4	1143.7	21.3	217.0			
	950	GORK			1133.4	1148.8		142.0			
	810	KRAK	42	SER	1133.5	1143.5	21.0	87.0			
	810	KRAK			1133.5	1148.0		117.0			
	808	ONDR	28	PRE	1135.0		5.0				
	650	GORK	8	S	1135.0	1135.1	.3	19.0	9.5		
	430	KRAK	46	C	1137.5	1143.5	15.0	76.0	18.0		
	430	KRAK			1137.5	1150.0		240.0			
	650	GORK	46	C	1139.0	1140.9	13.0	130.0			
	650	GORK			1139.0	1143.0		94.0			
	650	GORK			1139.0	1151.2		63.0			
	808	ONDR	46	C	1140.0	1143.0	5.0	92.0			
	1415	ATHN	47	GB	1142.5	1149.6	9.6	130.0			QL=5 ST=2 TYP=5

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
09	536	ONDR	46	C	1146.0	1149.0	7.0	60.0			
	2950	GORK	2	S/F	1210.0	1211.8	2.5	55.0			
	8800	ATHN	4	S/F	1318.1	1327.6	10.0	42.0			QL=5 ST=2 TYP=3
	2695	PENT	20	GRF	1340.0	1345.0	15.0	1.8	.9		
	2800	OTTA	20	GRF	1440.0	1450.0	20.0	2.0	1.0		
	930	BORD	42	SER	1503.0	1526.6	30.0	166.0	3.0		
	410	SGMR	47	GB	1525.1	1525.3	.5	119.0			QL=2 ST=2 TYP=5
	2800	OTTA	20	GRF	2100.0	2145.0	90.0	2.2	1.1		
	3750	TYKW	20	GRF	2140.0	2155.0	60.0	2.0	1.0		
	500	HIRA	40	F	2201.0	2221.7	32.0	8.0	4.0		SL
	245	PALE	47	GB	2230.6	2230.8	.5	169.0			QL=6 ST=2 TYP=5
	2695	PENT	1	S	2254.0	2257.0	8.0	5.8	2.0		
	2000	TYKW	21	GRF	2255.0	2301.0	35.0	2.0	1.0		
	2000	TYKW	5	S	2256.5	2257.5	2.5	1.5	0.5		
	9400	TYKW	21	GRF	2355.0U	0102.0	175.0U	17.0	7.0		RAIN
	3750	TYKW	21	GRF	2355.0	0102.0	200.0	12.0	5.0		
10	410	LEAR	43	NS	0149.3	0202.6	131.0	10.0			QL=6 ST=2 TYP=1
	100	GORK	44	NS	0501.0E		419.0D		5.0		
	204	IZMI	43	NS	0700.0		65.0	60.0			
	260	ONDR	44	NS	0745.0E		445.0D				
	127	TORN	43	NS	0810.0	1202.8	410.0	60.0	2.0		V=1
	245	LEAR	43	NS	2240.0	2314.1	210.3	15.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		5.0		
	2000	TYKW	21	GRF	0000.0	0100.0	195.0	7.0	4.0		
	2000	TYKW	45	C	0003.0	0008.8	20.0	24.0	7.0D		
	2000	TYKW			0003.0	0012.3		24.0			
	1000	TYKW	21	GRF	0004.0	0115.0	155.0	2.0	1.0		
	8800	LEAR	4	S/F	0005.6	0008.1	7.0	13.0			QL=6 ST=2 TYP=3
	1415	LEAR	4	S/F	0005.6	0009.1	7.4	17.0			QL=6 ST=2 TYP=3
	15400	LEAR	4	S/F	0005.6	0009.8	7.0	20.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0005.8	0008.1	7.2	26.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0006.0	0008.3	6.0	10.0	4.0		
	2695	PENT	4	S/F	0006.0	0008.8	7.0	24.0	10.0		
	1000	TYKW			0006.0	0009.2		7.0			
	1000	TYKW	45	C	0006.0	0012.3	11.0	25.0	3.0		
	500	HIRA	40	F	0006.0	0020.3	35.0	7.0	2.0		SL
	9400	TYKW	45	C	0007.0E	0008.3	5.0D	10.0	7.0D		
	2695	PALE	4	S/F	0007.6	0009.1	2.9	21.0			QL=6 ST=2 TYP=3
	410	LEAR	4	S/F	0007.8	0020.3	21.8	13.0			QL=6 ST=2 TYP=3
	1415	PALE	8	S	0008.1	0009.1	1.2	16.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0011.8	0012.1	1.0	8.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0012.0		25.0	4.0	2.0		RAIN
	3750	TYKW	29	PBI	0012.0		15.0	3.0	1.5		
	1415	PALE	8	S	0012.3	0012.8	.8	42.0			QL=6 ST=2 TYP=3
	2695	PENT	1	S	0014.0	0014.1	1.0	4.2	2.0		
	500	HIRA	1	S	0043.3	0044.2	2.0	5.0	3.0		ML
	1000	TYKW	5	S	0043.5	0044.5	2.5	2.0	0.7		
	610	LEAR	8	S	0043.6	0044.1	1.5	10.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0050.3	0051.1	1.5	10.0			QL=6 ST=2 TYP=3
	500	HIRA	1	S	0050.4	0051.2	1.0	5.0	3.0		ML
	410	LEAR	8	S	0051.1	0051.3	.5	4.0			QL=6 ST=2 TYP=3
	1000	TYKW	5	S	0134.3	0134.7	1.0	1.5	0.5		
	1000	TYKW	45	C	0214.0	0215.3	5.0	2.0	0.7		
	2000	TYKW	45	C	0258.8	0259.0	1.5	4.0	1.0		
	500	HIRA	45	C	0435.0	0507.4	57.0	98.0	30.0		WR
	610	LEAR	47	GB	0443.5	0507.1	61.6	480.0			QL=6 ST=2 TYP=5
	1000	TYKW			0444.0	0455.3		24.0			
	1000	TYKW	45	C	0444.0	0506.5	35.0	32.0	11.0		
	2000	TYKW	20	GRF	0450.0	0525.0	120.0	2.0	1.0		
	3750	TYKW	20	GRF	0453.0	0524.0	75.0	2.0	1.0		
	950	GORK			0503.0E		27.0D				
	650	GORK	47	GB	0504.0E	0507.4	57.0D	11.80			
	410	LEAR	8	S	0604.8	0605.0	.2	16.0			QL=6 ST=2 TYP=3
	204	IZMI	5	S	0710.5	0710.7	.8	210.0	150.0		
	3100	CRIM	26	FAL	0819.0	0910.0		5.0			
	9100	GORK	20	GRF	0823.1	0928.1	247.0D	30.0			
	1470	POTS	23	GRF	0830.0	0910.0	315.0	23.0			
	3000	POTS	20	GRF	0830.0	0913.0	365.0	22.0			
	9500	POTS	20	GRF	0830.0	0932.0	375.0	27.0			
	930	BORD	40	F	0830.0	0833.4	54.0	76.0	6.0		

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
10	260	ONDR	46	C	0830.0	0900.0U	40.0	51.0			
	950	GORK	21	GRF	0830.3	0909.8	79.0	19.0			
	808	ONDR	2	S/F	0831.0	0833.5	5.0	27.0			
	950	GORK	40	F	0831.2	0833.5	11.9	645.0			
	650	GORK	40	F	0831.2	0838.7	10.7	60.0			
	650	GORK	23	GRF	0831.2	0910.3	67.8	10.0			
	1415	LEAR	4	S/F	0832.1	0833.3	4.5	32.0			QL=6 ST=2 TYP=3
	610	LEAR	4	S/F	0832.1	0834.3	5.2	13.0			QL=6 ST=2 TYP=3
	100	GORK	27	RF	0832.7	0903.0	51.3	130.0			
	1470	POTS	4	S/F	0833.0	0834.5	2.6	21.0			
	1415	ATHN	47	GB	0833.6	0839.8	10.0	72.0			QL=6 ST=2 TYP=5
	2950	GORK	20	GRF	0834.0	0909.8	236.0D	23.0			
	1470	POTS	4	S/F	0836.5	0840.6	8.0	66.0			
	610	LEAR	47	GB	0837.5	0838.6	1.6	62.0			QL=6 ST=2 TYP=5
	1415	LEAR	47	GB	0837.6	0840.1	6.0	100.0			QL=6 ST=2 TYP=5
	410	LEAR	4	S/F	0837.8	0842.0	4.5	20.0			QL=6 ST=2 TYP=3
	808	ONDR	8	S	0838.5	0838.5	1.0	25.0			
	8800	LEAR	8	S	0838.5	0840.1	1.6	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0838.8	0840.1	1.5	11.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0838.8	0840.1	1.5	11.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0840.0	0840.1	.3	13.0			QL=6 ST=2 TYP=3
	2695	LEAR	20	GRF	0848.3	0901.8	53.0	39.0			QL=6 ST=2 TYP=2
	15400	LEAR	20	GRF	0848.8	0850.1	3.3	24.0			QL=6 ST=2 TYP=2
	4995	LEAR	20	GRF	0848.8	0855.3	6.7	19.0			QL=6 ST=2 TYP=2
	1415	LEAR	20	GRF	0848.8	0903.8	42.5	26.0			QL=6 ST=2 TYP=2
	8800	LEAR	20	GRF	0849.0	0851.8	2.8	21.0			QL=6 ST=2 TYP=2
	410	LEAR	8	S	0853.8	0854.0	.8	22.0			QL=6 ST=2 TYP=3
	950	GORK	4	S/F	0856.4	0857.1	.8	2.0			
	1415	ATHN	8	S	0903.1	0903.6	.9	19.0			QL=6 ST=2 TYP=3
	1470	POTS	8	S	0903.8	0903.9	.4	27.0			
	808	ONDR	4	S/F	0913.0	0915.0	4.0	12.0			
	650	GORK	4	S/F	0913.3	0914.8	4.0	19.0	9.5		
	810	KRAK	2	S/F	0913.5	0914.7	2.7	20.0	9.0		
	950	GORK	4	S/F	0913.8	0914.7	3.2	1.8			
	650	GORK	2	S/F	0919.1	0919.7	1.1	6.0	3.0		
	650	GORK	4	S/F	0920.7	0922.4	2.5	14.5			
	650	GORK	40	F	0923.7	0927.5	11.5	14.0			
	536	ONDR	1	S	1113.0	1113.0	15.0	7.0			
	260	ONDR	45	C	1125.0		61.0				
	430	KRAK	41	F	1351.8	1353.5	5.0	19.0	5.0		
	2800	OTTA	260	FAL	1430.0	1505.0	35.0	-2.6	-1.3		
	2800	OTTA	260	FAL	1625.0	1650.0	25.0	-2.2	-1.1		
	930	BORD	41	F	1712.7	1712.7	.4	14.0	2.0		
	410	PALE	8	S	2056.8	2058.0	2.0	48.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	2326.0	2326.1	.1	16.0			QL=6 ST=2 TYP=3
11	410	LEAR	43	NS	0311.1	0314.8	4.5	11.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2258.5	0004.8	688.5D	40.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2258.5	2301.3		15.0			QL=6 ST=2 TYP=1
	2000	TYKW	20	GRF	0100.0	0145.0	170.0	6.0	3.0		
	3750	TYKW	20	GRF	0100.0	0200.0	200.0	6.0	3.0		
	410	LEAR	8	S	0113.8	0114.0	.2	17.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	0132.0	0132.5	0.7	19.0	4.0		
	1000	TYKW	45	C	0137.7U	0138.1	2.0U	20.0	4.0U		INTERFERENCE
	245	PALE	47	GB	0148.0	0148.1	.3	63.0			QL=6 ST=2 TYP=5
	245	PALE	47	GB	0151.1	0151.3	1.7	52.0			QL=6 ST=2 TYP=5
	245	LEAR	8	S	0303.8	0303.8	.2	16.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0402.5	0402.5	.1	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0423.1	0423.1	.2	15.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0504.8	0505.0	.5	23.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0606.0	0606.1	.1	13.0			QL=6 ST=2 TYP=3
	3100	CRIM	26	FAL	0610.0	0812.0		8.0			
	245	LEAR	20	GRF	0717.5	0743.1	50.0	26.0			QL=6 ST=2 TYP=2
	245	LEAR	8	S	0849.8	0849.8	.2	28.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0849.8	0849.8	.2	9.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0905.6	0905.8	.2	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0905.6	0905.8	.2	32.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0926.3	0926.3	.2	20.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0926.3	0926.3	.2	42.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0937.5	0937.5	.1	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	1009.1	1009.3	.2	38.0			QL=6 ST=2 TYP=3

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
11	410	LEAR	8	S	1009.1	1009.3	.2	8.0			QL=6 ST=2 TYP=3
	260	ONDR	46	C	1224.0	1226.0	5.0	2.0			
	2800	OTTA	1	S	1635.0	1635.7	2.0	2.2	1.1		
	930	BORD	46	C	1635.3	1635.6	.9	52.0	3.0		
	2695	SGMR	8	S	1816.0	1816.1	.3	13.0			QL=6 ST=2 TYP=3
	410	PALE	8	S	1940.6	1940.6	.2	22.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2254.8	2254.8	.5	39.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	2254.8	2254.8	.2	6.0			QL=6 ST=2 TYP=3
	3750	TYKW	20	GRF	2345.0	0014.0	55.0	1.5	0.7		
12	1415	LEAR	8	S	0240.0	0441.0	121.0D	18.0			QL=6 ST=2 TYP=3
	410	LEAR	4	S/F	0242.6	0441.0	121.0D	13.0			QL=6 ST=2 TYP=3
	260	ONDR	42	SER	0806.0		20.0	5.0			
	260	ONDR	46	C	0907.0	0907.3	2.0	6.0			
	9400	HUAN	21	GRF	1345.1	1407.8	60.4	5.5	3.5		0
	2800	OTTA	21	GRF	1415.0		375.0	4.4	2.2		
	2800	OTTA	45	C	1420.0	1420.5	4.0	41.0	20.5		
	2650	DWIN	2	S/F	1420.0	1421.0	4.0	10.0	5.0		
	3100	BERN	45	C	1420.0	1420.4	5.0	54.0			OPR
	5200	BERN	45	C	1420.0	1420.4	5.0	52.0			OPR
	9500	POTS	4	S/F	1420.0	1420.5	3.5	15.0			
	3000	POTS	4	S/F	1420.0	1420.5	4.0	27.0			
	930	BORD	46	C	1420.0	1420.7	5.0	36.0	5.0		
	1470	POTS	4	S/F	1420.0	1421.5	8.0	240.0			
	4995	SGMR	4	S/F	1420.1	1420.5	3.4	39.0			QL=6 ST=2 TYP=3
	2695	SGMR	4	S/F	1420.1	1420.6	3.5	43.0			QL=6 ST=2 TYP=3
	9400	HUAN	4	S/F	1420.1	1420.6	3.3	13.7	6.2		0
	1415	SGMR	47	GB	1420.1	1421.1	3.7	410.0			QL=6 ST=2 TYP=5
	8800	SGMR	4	S/F	1420.3	1421.8	3.7	24.0			QL=5 ST=2 TYP=3
	1415	ATHN	47	GB	1420.6	1421.1	4.2	260.0			QL=6 ST=2 TYP=5
	8800	ATHN	4	S/F	1420.6	1421.1	4.2	13.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	1420.6	1421.1	4.2	44.0			QL=6 ST=2 TYP=3
	2800	OTTA	29	PBI	1424.0	1424.0	6.0	4.2	1.4		
	29	UPIC	2	S/F	1501.2	1502.5	1.3U				
	33	UPIC	4	S/F	1502.1	1502.5	1.2				
	1000	TYKW	45	C	2301.0	2304.8	10.0	9.0	2.0		
	3750	TYKW	5	S	2304.0	2306.6	6.0	11.0	4.0		
	2000	TYKW	5	S	2305.0	2306.6	5.0	8.0	3.0		
	4995	LEAR	4	S/F	2305.1	2306.3	3.7	11.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	2305.3	2306.6	3.5	13.0			QL=6 ST=2 TYP=3
	1415	LEAR	4	S/F	2306.0	2306.8	2.1	11.0			QL=6 ST=2 TYP=3
	2000	TYKW	20	GRF	2315.0	0020.0	135.0	2.0	1.0		
	3750	TYKW	20	GRF	2315.0	0020.0	135.0	2.0	1.0		RAIN
	410	LEAR	8	S	2315.1	2315.1	.2	17.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	2315.1	2315.1	.2	4.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2324.3	2324.3	.2	11.0			QL=6 ST=2 TYP=3
13	410	LEAR	8	S	0242.5	0242.6	.5	13.0			QL=6 ST=3 TYP=3
	245	LEAR	8	S	0629.8	0630.0	.3	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0909.3	0909.5	.3	6.0			QL=1 ST=3 TYP=3
	245	LEAR	8	S	0909.3	0909.5	.3	20.0			QL=1 ST=3 TYP=3
	810	KRAK	8	S	1139.2	1139.2	.1	6.0			
	430	KRAK	8	S	1139.2	1139.2	.2	14.0			
	810	KRAK	8	S	1145.0	1145.0	.1	4.0			
	260	ONDR	41	F	1200.0	1224.0	30.0	11.0			
	810	KRAK	2	S/F	1205.7	1206.3	1.5	15.0	5.0		
	930	BORD	46	C	1206.0	1208.8	6.0	50.0	8.0		
	810	KRAK	7	C	1207.5	1208.8	5.0	27.0	9.0		
	808	ONDR	46	C	1208.0	1209.0	4.0	40.0			
	430	KRAK	8	S	1219.0	1219.0	.1	19.0			
	810	KRAK	8	S	1219.0	1219.0	.1	14.0			
	2800	OTTA	20	GRF	1834.0	1836.4	12.0	5.4	2.0		
	410	SGMR	4	S/F	1837.3	1838.3	2.3	25.0			QL=6 ST=2 TYP=3
	245	PALE	49	GB	1837.3	1840.1	3.7	3800.0			QL=5 ST=3 TYP=6
	245	SGMR	49	GB	1837.3	1840.1	9.8	2699.0			QL=2 ST=2 TYP=6
14	208	VORO	43	NS	0130.0		90.0D		0.0		
	245	LEAR	43	NS	0131.0	0451.0	533.0	17.0			QL=6 ST=2 TYP=1
	260	ONDR	44	NS	0743.0E		257.0D				
	245	LEAR	43	NS	2242.0	0957.8	702.0D	43.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0005.0	0005.1	.1	22.0			QL=1 ST=3 TYP=3

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14	245	LEAR	8	S	0115.6	0116.1	1.0	15.0			QL=6 ST=2 TYP=3
	650	GORK	21	GRF	0458.3		22.7				
	950	GORK	40	F	0458.5E	0511.3	33.0D	27.0			
	1000	TYKW	45	C	0501.5	0510.9	14.0	38.0	6.0		
	650	GORK	4	S/F	0508.3	0510.6	3.6	9.0			
	410	LEAR	8	S	0508.8	0509.8	1.5	11.0			QL=6 ST=2 TYP=3
	650	GORK	4	S/F	0517.7	0518.3	1.5	15.0			
	245	LEAR	47	GB	0525.5	0525.6	.5	69.0			QL=6 ST=2 TYP=5
	9500	POTS	20	GRF	0747.0	0749.5	38.0	4.0			
	3000	POTS	20	GRF	0748.0	0750.8	17.0	5.0			
	430	KRAK	8	S	0949.8	0950.0	.3	8.0			
	930	BORD	46	C	1635.4	1635.7	.5	21.0	3.0		
	2800	OTTA	27	RF	1750.0		190.0	2.0	1.8		
	2800	OTTA	24	R	1750.0	1806.0	16.0	2.0	.7		
	2800	OTTA	24P	R	1806.0		144.0	2.0			
	2800	OTTA	26	FAL	2030.0	2100.0	30.0	-2.0	-1.0		
	3750	TYKW	20	GRF	2330.0	2355.0	60.0	1.5	0.7		
15	245	LEAR	43	NS	2242.0	2306.1	52.3	10.0			QL=6 ST=2 TYP=1
	2000	TYKW	20	GRF	0404.0	0420.0	85.0	2.0	1.0		
	3750	TYKW	20	GRF	0404.0	0423.0	85.0	2.0	1.0		
	930	BORD	41	F	1134.7	1134.9	.5	21.0	3.0		
	3000	POTS	21	GRF	1235.0	1257.7	46.0	14.0			
	3100	CRIM	1	S	1255.4	1257.0	4.0	7.0	2.0		
	2800	OTTA	1	S	1256.0	1257.1	7.0	7.4	2.4		
	536	ONDR	4	S/F	1256.0	1257.5	3.0	10.0	8.0		
	6100	KISV	1	S	1256.2	1257.0	2.5	5.0			
	810	KRAK	1	S	1256.3	1257.0	8.0	4.0	2.0		
	9500	POTS	20	GRF	1256.5	1257.0	3.5	3.0			
	430	KRAK	8	S	1256.6	1256.6	.1	60.0			
	410	SGMR	8	S	1256.6	1256.8	.5	13.0			QL=6 ST=2 TYP=3
	1415	SGMR	8	S	1256.6	1257.1	.5	13.0			QL=6 ST=2 TYP=3
	610	SGMR	8	S	1256.8	1257.0	.5	20.0			QL=6 ST=2 TYP=3
	430	KRAK	3	S	1256.8	1257.3	1.2	20.0	8.0		
	930	BORD	41	F	1412.2	1413.1	1.0	19.0	2.0		
	930	BORD	8	S	1631.6	1631.7	.2	20.0	2.0		
	2800	OTTA	20	GRF	1645.0	1920.0	300.0	5.6	2.8		
	930	BORD	41	F	1724.0	1724.1	.5	12.0	2.0		
	245	LEAR	8	S	2359.1	2359.1	.2	22.0			QL=6 ST=2 TYP=3
16	245	LEAR	43	NS	0036.1	0652.3	522.7	17.0			QL=6 ST=2 TYP=1
	245	SGMR	43	NS	1835.0	2202.1	234.0D	68.0			QL=2 ST=2 TYP=1
	245	PALE	43	NS	1855.0	2323.1	555.0D	420.0			QL=5 ST=2 TYP=1
	245	LEAR	43	NS	2243.0	0304.0	699.0D	169.0			QL=6 ST=2 TYP=1
	9400	TYKW	5	S	0032.0	0034.0	25.0	4.0	2.0		
	3750	TYKW	20	GRF	0032.0	0035.0	55.0	2.0	1.0		
	9400	TYKW	20	GRF	0100.0	0112.0	40.0	4.0	2.0		
	2000	TYKW	5	S	0134.7	0134.9	0.6	3.0	1.0		
	3750	TYKW	20	GRF	0145.0	0205.0	60.0	1.5	0.7		
	3750	TYKW	21	GRF	0310.0	0324.0	90.0	2.0	1.0		
	9400	TYKW	21	GRF	0310.0	0325.0	100.0	4.0	2.0		
	3750	TYKW	5	S	0314.0	0314.7	2.0	1.5	0.5		
	9400	TYKW	5	S	0314.0	0314.7	2.0	3.0	1.0		
	3750	TYKW	5	S	0317.0	0318.3	3.0	1.0	0.3		
	3750	TYKW	5	S	0338.0	0341.0	7.0	1.5	0.5		
	9400	TYKW	5	S	0347.0	0348.7	3.0	9.0	5.0		
	3750	TYKW	5	S	0347.0	0348.8	5.0	10.0	3.0		
	8800	LEAR	4	S/F	0347.0	0348.6	2.8	13.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0347.3	0348.6	2.7	13.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0347.6	0348.6	1.7	6.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0348.3	0348.6	1.5	4.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0350.0		35.0	4.0	2.0		
	3750	TYKW	29	PBI	0352.0		30.0	2.0	1.0		
	9400	TYKW	5	S	0430.0	0431.4	10.0	3.0	1.5		
	3750	TYKW	5	S	0430.0	0431.7	10.0	1.5	0.5		
	260	ONDR	41	F	0723.0E		37.0D	10.0			
	127	TORN	27	RF	0745.0		14.0		60.0		
	930	BORD	46	C	0749.6	0749.8	.4	19.0	2.0		
	810	KRAK	8	S	0838.2	0838.2	.1	6.0			
	810	KRAK	8	S	0838.2	0838.2	.2	8.0			
	930	BORD	46	C	1210.0	1210.2	.7	74.0	2.0		

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16	430	KRAK	8	S	1309.6	1309.7	.2	22.0			
	810	KRAK	8	S	1309.8	1309.8	.1	10.0			
	930	BORD	41	F	1348.7	1349.1	1.0	18.0	2.0		
	2800	OTTA	240	R	1635.0	1655.0	20.0	1.8	1.0		
	2800	OTTA	1	S	2050.2	2050.5	1.2	5.0			
	2800	OTTA	21	GRF	2130.0	2215.0	210.0D	7.8			
	2800	OTTA	8	S	2137.5	2137.5	.1	3.0			
	9400	HUAN	21	GRF	2150.2	2203.2	18.9	14.6	4.4		L
	2000	TYKW	45	C	2159.0	2200.1	4.0	17.0	5.0		
	3750	TYKW			2159.0	2200.2		40.0			
	1000	TYKW	45	C	2159.0	2200.2	6.0	85.0	5.0		
	3750	TYKW	45	C	2159.0	2201.4	5.0	41.0	12.0		
	9400	TYKW	45	C	2159.0	2201.4	4.0	48.0	20.0		RAIN
	9400	HUAN	4	S/F	2159.4	2200.2	3.2	38.4	24.5		L
	9400	HUAN			2159.4	2201.6		41.0			L
	2800	OTTA	46F	C	2159.7	2200.0	5.0	30.0	10.0		
	2695	SGMR	8	S	2159.8	2200.1	.5	29.0			QL=6 ST=2 TYP=3
	1415	SGMR	8	S	2159.8	2200.1	.5	19.0			QL=6 ST=2 TYP=3
	8800	SGMR	4	S/F	2159.8	2201.3	2.2	30.0			QL=6 ST=2 TYP=3
	8800	PALE	4	S/F	2159.8	2201.5	3.0	46.0			QL=6 ST=2 TYP=3
	4995	SGMR	4	S/F	2159.8	2201.5	2.3	32.0			QL=6 ST=2 TYP=3
	4995	PALE	4	S/F	2159.8	2201.5	2.8	35.0			QL=6 ST=2 TYP=3
	15400	PALE	8	S	2200.0	2200.1	1.8	25.0			QL=6 ST=2 TYP=3
	1415	PALE	8	S	2200.0	2200.1	.3	17.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	2203.0		50.0	12.0	6.0		
	2000	TYKW	29	PBI	2203.0		110.0	4.0	2.0		
	3750	TYKW	29	PBI	2204.0		105.0	6.0	3.0		
	1000	TYKW	30	PBI	2205.0		40.0	2.0	1.0		
	1000	TYKW	5	S	2212.6	2212.8	0.6	3.0	0.7		
	410	PALE	47	GB	2320.8	2321.8	2.2	92.0			QL=1 ST=3 TYP=5
	245	PALE	49	GB	2321.8	2321.8	.3	1800.0			QL=1 ST=2 TYP=6
	1000	TYKW	45	C	2322.0	2322.4	1.0	4.0	1.0		
17	245	SGMR	43	NS	1730.0	1748.0	300.0D	57.0			QL=2 ST=2 TYP=1
	245	PALE	43	NS	2033.0	2117.6	452.0D	84.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2243.0	0534.5	698.0D	81.0			QL=6 ST=2 TYP=1
	410	LEAR	43	NS	2303.3	2330.0	259.5	45.0			QL=6 ST=2 TYP=1
	200	HIRA	44	NS	2353.0E	0530.0	530.0D	10.0	5.0		WR
	9400	TYKW	20	GRF	0035.0	0047.0	35.0	4.0	2.0		
	3750	TYKW	20	GRF	0035.0	0057.0	38.0D	2.0	1.0D		
	245	LEAR	47	GB	0057.0	0057.1	.8	78.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0156.8	0157.1	.3	11.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0221.0	0224.0	15.0	40.0	10.0		
	3750	TYKW			0221.0	0232.1		34.0			
	9400	TYKW			0222.0	0224.6		69.0			
	2930	VORO	42	SER	0222.0	0225.0	13.0	39.0			
	9400	TYKW	45	C	0222.0	0231.8	15.0	79.0	24.0		
	1415	LEAR	8	S	0222.8	0223.8	1.3	19.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	0223.0	0223.4	2.0	14.0	1.0		
	2000	TYKW			0223.0	0224.7		8.0			
	2000	TYKW	45	C	0223.0	0231.7	11.0	12.0	3.0		
	2695	LEAR	4	S/F	0223.1	0224.6	5.4	21.0			QL=6 ST=2 TYP=3
	4995	LEAR	47	GB	0223.1	0224.6	12.9	56.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0223.1	0224.6	12.9	73.0			QL=6 ST=2 TYP=5
	2902	YUNN	5	S	0223.1	0224.6	4.5	26.0			
	15400	LEAR	47	GB	0223.3	0224.8	12.5	49.0			QL=6 ST=2 TYP=5
	3653	YUNN	5	S	0223.4	0224.6	5.2	15.0			
	3653	YUNN	5	S	0230.8	0232.1	2.9	17.0			
	1000	TYKW	5	S	0231.0	0231.6	2.0	3.0	0.5		
	2840	PEKG	3	S	0231.0	0231.8	2.0	23.0	14.0		
	9395	PEKG	3	S	0231.0	0232.1	30.0	56.1	23.5		
	2902	YUNN	5	S	0231.1	0231.6	3.2	25.0			
	2000	TYKW	30	PBI	0234.0		110.0	3.0	1.5		
	3750	TYKW	30	PBI	0236.0		80.0	4.0	2.0		
	9400	TYKW	29	PBI	0237.0		85.0U	10.0	5.0U		
	3750	TYKW	5	S	0242.0	0244.0	5.0	2.0	0.7		
	2000	TYKW	5	S	0242.0	0244.0	5.0	1.5	0.5		
	245	PALE	8	S	0252.1	0253.3	1.4	48.0			QL=6 ST=2 TYP=3
	200	HIRA	8	S	0303.6	0303.9	.5	1600.0			0
	100	HIRA	46	C	0303.8	0303.8	.7	70.0	43.0		
	610	LEAR	8	S	0417.0	0417.0	.1	6.0			QL=6 ST=2 TYP=3

SOLAR RADIO EMISSION
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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	410	LEAR	8	S	0417.0	0417.0	.1	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0417.0	0417.0	.1	5.0			QL=6 ST=2 TYP=3
	9400	TYKW	5	S	0440.0	0443.0	4.0D	5.0	2.0D		
	410	LEAR	8	S	0536.0	0536.1	.1	17.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0537.6	0537.8	.5	23.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0537.6	0537.8	.4	10.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0639.3	0639.5	.5	63.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0639.3	0639.5	.3	17.0			QL=6 ST=2 TYP=3
	204	IZMI	42	SER	0639.8		16.0				
	610	LEAR	47	GB	0654.3	0654.5	.5	71.0			QL=6 ST=2 TYP=5
	410	LEAR	47	GB	0654.3	0654.5	.5	160.0			QL=6 ST=2 TYP=5
	245	LEAR	47	GB	0654.5	0654.6	.3	60.0			QL=6 ST=2 TYP=5
	9400	TYKW	5	S	0715.0	0715.6	3.0	4.0	1.5		
	536	ONDR	4	S/F	0720.5	0721.5	1.5	11.0	5.0		
	9395	PEKG	20	GRF	0722.0	0723.6	13.0	10.4	4.9		
	9400	TYKW	5	S	0722.0	0723.7	12.0	9.0	3.0		
	2000	TYKW	5	S	0722.0	0724.0	8.0	3.0	1.0		
	3750	TYKW	45	C	0722.0	0725.0	5.0	12.0	5.0		
	2840	PEKG	45	C	0722.0	0725.0	11.0	9.6	5.6		
	9500	POTS	1	S	0722.0	0723.9	4.0	10.0			
	3100	CRIM	1	S	0722.0	0725.0	4.0	9.0	3.0		
	6100	KISV	46	C	0722.3	0723.6	3.5	12.0			
	6100	KISV			0722.3	0725.1		13.0			
	2950	GORK	1	S	0722.8	0724.0	2.9	5.0	2.5		
	9100	GORK	20	GRF	0722.8	0724.3	6.5	10.0			
	8800	ATHN	4	S/F	0723.1	0724.3	4.4	13.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	0723.3	0725.6	4.2	13.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0723.5	0724.0	3.3	13.0			QL=6 ST=2 TYP=3
	4995	LEAR	4	S/F	0723.5	0725.0	2.6	16.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0723.8	0725.5	2.0	16.0			QL=6 ST=2 TYP=3
	6100	KISV	29	PBI	0725.5	0725.5	26.5	5.0			
	3100	CRIM	29	PBI	0726.0	0726.0	3.0	3.0	1.0		
	3750	TYKW	29	PBI	0727.0		25.0	3.0	1.5		
	204	IZMI	42	SER	0727.0		45.0	700.0			
	245	LEAR	47	GB	0727.5	0727.6	.3	85.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0727.5	0727.6	.3	30.0			QL=6 ST=2 TYP=3
	260	ONDR	42	SER	0727.5	0731.0	9.5	209.0D			
	950	GORK	2	S/F	0730.3	0732.0	7.8	17.0			
	500	HIRA	7	C	0730.4	0730.9	1.0	38.0	20.0		WL
	410	LEAR	47	GB	0730.6	0731.1	1.2	189.0			QL=6 ST=2 TYP=5
	200	HIRA	45	C	0730.6	0731.5	1.1	890.0	335.0		0
	610	LEAR	8	S	0730.8	0731.3	1.0	18.0			QL=6 ST=2 TYP=3
	1000	TYKW	45	C	0731.0	0731.4	2.0	14.0	3.0		
	2000	TYKW	5	S	0731.0	0731.4	1.5	3.0	1.0		
	3100	CRIM	1	S	0731.0	0731.2	1.0	3.0	1.0		
	245	LEAR	47	GB	0731.0	0731.3	1.1	310.0			QL=6 ST=2 TYP=5
	1415	LEAR	8	S	0731.0	0731.5	.8	10.0			QL=6 ST=2 TYP=3
	3000	POTS	1	S	0731.0	0731.6	1.3	6.0			
	1470	POTS	3	S	0731.0	0731.6	1.0	3.0			
	234	POTS	42	SER	0731.1	0731.5	3.2	330.0	5.0		III
	2695	LEAR	8	S	0731.1	0731.5	.7	5.0			QL=6 ST=2 TYP=3
	650	GORK	4	S/F	0731.2	0732.7	2.5	19.5			
	2950	GORK	1	S	0731.4	0731.9	1.0	5.7			
	245	LEAR	47	GB	0734.1	0734.1	.4	210.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0734.1	0734.1	.2	37.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0811.3	0811.5	.3	5.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0811.3	0811.5	.5	200.0			QL=6 ST=2 TYP=5
	234	POTS	4	S/F	0811.4	0811.5	.2	150.0	50.0		
	260	ONDR	8	S	0811.5	0811.5	1.0	141.0			
	410	LEAR	8	S	0824.6	0825.1	1.0	22.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0825.5	0825.6	.5	43.0			
	9100	GORK	21	GRF	0826.0	0906.8	244.0D	25.0			
	6100	KISV	28	PRE	0854.0	0857.5	5.0	5.0			
	9500	POTS	29	PBI	0859.0	0900.0	221.0	76.0			
	3000	POTS	29	PBI	0859.0	0902.0	221.0	35.0			
	3100	CRIM	3	S	0859.0	0902.1	7.0	38.0	13.0		
	6100	KISV	46	C	0859.1	0900.8	8.5	60.0			
	6100	KISV			0859.1	0902.2		40.0			
	2950	GORK			0859.1	0903.5		26.0			
	6100	KISV			0859.1	0903.7		35.0			
	5200	BERN	45	C	0859.3	0900.8	15.0	98.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	11800	BERN	45	C	0859.3	0900.8	15.0	96.0			
	3100	BERN	45	C	0859.3	0901.3	15.0	66.0			
	19600	BERN	45	C	0859.3	0902.3	15.0	50.0			
	2950	GORK	4	S/F	0859.4	0902.1	5.4	31.0			
	2650	DWIN	2	S/F	0900.0	0902.0	8.0	10.0	5.0		
	808	ONDR	45	C	0900.0		4.0				
	808	ONDR			0900.0	0900.5		55.0			
	930	BORD	45	C	0900.0	0900.7	4.4	148.0	14.0		
	808	ONDR			0900.0	0902.0		4.0			
	1470	POTS	29	PBI	0900.0	0902.0	240.0	102.0			
	2902	YUNN	5	S	0900.3	0900.7	5.2	52.0			
	9100	GORK	45	C	0900.4	0900.8	5.4	90.0			
	9100	GORK			0900.4	0902.8		60.0			
	8800	ATHN	47	GB	0900.5	0900.6	12.0	83.0			QL=6 ST=3 TYP=5
	950	GORK	46	C	0900.5	0900.6	3.5	113.0			
	8800	LEAR	47	GB	0900.5	0900.8	7.8	110.0			QL=6 ST=2 TYP=5
	4995	LEAR	4	S/F	0900.5	0900.8	6.8	50.0			QL=6 ST=2 TYP=3
	3653	YUNN	4	S/F	0900.5	0901.2	10.1	61.0			
	2695	ATHN	4	S/F	0900.5	0901.6	7.3	34.0			QL=6 ST=3 TYP=3
	650	GORK	46	C	0900.5	0901.8	3.2	22.0			
	950	GORK			0900.5	0902.0		88.0			
	2695	LEAR	4	S/F	0900.5	0902.3	6.6	40.0			QL=6 ST=2 TYP=3
	650	GORK			0900.5	0902.4		18.0			
	15400	LEAR	4	S/F	0900.6	0900.8	6.5	43.0			QL=6 ST=2 TYP=3
	1415	ATHN	47	GB	0900.6	0901.5	9.0	130.0			QL=6 ST=3 TYP=5
	1415	LEAR	47	GB	0900.6	0902.0	4.4	200.0			QL=6 ST=2 TYP=5
	610	LEAR	8	S	0902.0	0902.3	1.6	22.0			QL=6 ST=2 TYP=3
	2950	GORK	29	PBI	0904.8	0904.8	185.0D	14.0			
	3100	CRIM	29	PBI	0906.0	0906.0	210.0	6.0	2.0		
	6100	KISV	29	PBI	0907.5	0907.5	35.0	17.0			
	260	ONDR	42	SER	1022.8	1033.0	12.0	141.0			
	204	IZMI	42	SER	1024.0		36.0	800.0			
	234	POTS	4	S/F	1033.2	1033.3	.3	1000.0	150.0		III
	1415	ATHN	4	S/F	1047.8	1100.3	16.5	20.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	1055.0	1100.3	10.1	4.0			QL=6 ST=2 TYP=3
	430	KRAK	41	F	1058.8	1100.0	1.5	25.0	5.0		
	950	GORK	2	S/F	1059.2	1100.2	2.2	12.0			
	810	KRAK	2	S/F	1059.5	1100.0	.8	22.0	6.0		
	3000	POTS	1	S	1059.5	1100.0	1.0	6.0			
	536	ONDR	41	F	1059.5	1100.3	2.0	20.0			
	1470	POTS	4	S/F	1059.5	1100.4	2.0	9.0			
	930	BORD	46	C	1059.6	1100.3	1.0	18.0	4.0		
	650	GORK			1059.6	1100.7		17.0			
	650	GORK	41	F	1059.6	1103.2	3.6U	77.0			
	6100	KISV	1	S	1059.7	1100.3	1.0	3.0			
	810	KRAK	8	S	1101.0	1101.0	.2	13.0			
	536	ONDR	46	C	1222.0	1222.0	2.5	50.0			
	260	ONDR	45	C	1233.0	1238.0U	5.0U	216.0U			
	245	SGMR	49	GB	1233.1	1233.3	5.9	1100.0			QL=2 ST=3 TYP=6
	610	SGMR	47	GB	1233.1	1233.3	2.0	110.0			QL=2 ST=3 TYP=5
	410	SGMR	47	GB	1233.1	1234.3	2.9	110.0			QL=2 ST=3 TYP=5
	127	TORN	42	SER	1233.2	1234.2	5.4	70.0			
	536	ONDR	46	C	1234.0	1234.0	2.5	64.0			
	3100	CRIM	1	S	1234.0	1234.4	2.0	13.0	4.0		
	1415	SGMR	4	S/F	1234.1	1234.5	4.5	11.0			QL=2 ST=3 TYP=3
	6100	KISV	1	S	1234.1	1234.5	1.0	3.0			
	930	BORD	46	C	1234.2	1234.4	2.0	30.0	8.0		
	2800	OTTA	3	S	1234.3	1234.5	1.0	12.6	6.5		
	430	KRAK	42	SER	1324.0	1325.0	31.5	88.0			
	2800	OTTA	21	GRF	1332.0	1520.0	200.0	7.6	4.0		
	2800	OTTA	46F	C	1333.2	1334.0	5.8	48.0	17.8		
	3000	POTS	4	S/F	1333.5	1334.9	12.0	51.0			
	2695	SGMR	4	S/F	1333.6	1334.6	6.7	48.0			QL=6 ST=3 TYP=3
	808	ONDR	42	SER	1334.0	1334.5	6.0				
	15400	SGMR	4	S/F	1334.0	1334.6	4.5	21.0			QL=6 ST=3 TYP=3
	9500	POTS	29	PBI	1334.0	1334.7	21.0	34.0			
	5200	BERN	45	C	1334.0	1334.8	8.0	113.0			
	1415	SGMR	47	GB	1334.0	1334.8	7.1	54.0			QL=6 ST=3 TYP=5
	11800	BERN	4	S/F	1334.0	1334.8	8.0	50.0			
	3100	BERN	45	C	1334.0	1334.8	8.0	88.0			
	8800	SGMR	4	S/F	1334.1	1334.6	4.9	47.0			QL=6 ST=3 TYP=3

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
17	4995	SGMR	47	GB	1334.1	1334.6	5.9	69.0			QL=6 ST=3 TYP=5
	930	BORD	46	C	1334.4	1334.7	5.0	277.0	12.0		
	1470	POTS	4	S/F	1334.5	1336.6	5.5	52.0			
	2650	DWIN	2	S/F	1335.0	1335.0	4.0	10.0	5.0		
	610	SGMR	4	S/F	1335.0	1335.6	4.0	20.0			QL=6 ST=3 TYP=3
	810	KRAK	4	S/F	1335.0	1336.3	4.0	61.0	2.0		
	2800	OTTA	29	PBI	1339.0	1339.0	16.0	5.6	2.6		
	2800	OTTA	240	R	1815.0	1930.0	75.0	3.8	1.9		
	9400	HUAN	45	C	2010.7	2012.6	7.9	232.6	85.6		L
	4995	SGMR	47	GB	2010.8	2012.1	9.0	189.0			QL=6 ST=3 TYP=5
	2800	OTTA	46F	C	2011.0	2012.3	7.0	200.0	59.0		
	15400	SGMR	47	GB	2011.0	2012.3	16.6	210.0			QL=6 ST=3 TYP=5
	2695	SGMR	47	GB	2011.1	2012.1	9.7	270.0			QL=6 ST=3 TYP=5
	8800	SGMR	47	GB	2011.1	2012.5	10.0	219.0			QL=6 ST=3 TYP=5
	4995	PALE	47	GB	2011.5	2012.1	6.1	139.0			QL=6 ST=2 TYP=5
	8800	PALE	47	GB	2011.6	2012.6	6.0	219.0			QL=6 ST=2 TYP=5
	15400	PALE	47	GB	2011.8	2012.6	7.5	200.0			QL=6 ST=2 TYP=5
	610	SGMR	49	GB	2011.8	2015.5	17.8	3199.0			QL=6 ST=3 TYP=6
	1415	SGMR	49	GB	2012.0	2012.6	11.8	4100.0			QL=6 ST=3 TYP=6
	610	PALE	49	GB	2012.1	2012.6	14.2	99.0			QL=6 ST=2 TYP=6
	2695	PALE	47	GB	2012.8	2013.3		370.0			QL=6 ST=1 TYP=5
	410	SGMR	49	GB	2014.6	2018.6	16.7	1699.0			QL=6 ST=3 TYP=6
	410	PALE	49	GB	2015.1	2017.6	11.2	880.0			QL=6 ST=2 TYP=6
	2800	OTTA	29	PBI	2018.0	2018.0	130.0	11.8	5.9		
	9400	HUAN	29	PBI	2018.6	2018.6	15.0	22.8	15.2		L
	3750	TYKW	21	GRF	2300.0	0007.0	170.0	4.0	2.0		
	2695	PENT	240	R	2300.0	2355.0	55.0	4.0	2.2		
	3750	TYKW	45	C	2322.0	2329.3	11.0	3.0	1.0		
	9400	TYKW	45	C	2324.0	2329.6	7.0	9.0	3.0		
	9400	TYKW	29	PBI	2331.0		20.0	3.0	1.5		
	2000	TYKW	21	GRF	2335.0	2355.0	120.0	2.0	1.0		
	1000	TYKW	20	GRF	2345.0	2355.0	55.0	2.0	1.0		
	208	VORO	41	F	2347.0		8.0	200.0D			
18	260	ONDR	44	NS	0706.0E		256.0D				
	127	TORN	44	NS	0840.0E	0936.7	246.0D	50.0			V=1
	245	LEAR	43	NS	2243.0	0510.8	697.0D	83.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		1.0		
	3750	TYKW	5	S	0029.0	0034.0	15.0	2.0	1.0		
	9395	PEKG	1	S	0046.0	0051.4	8.0	8.1	5.1		
	2840	PEKG	3	S	0048.0	0051.5	6.0	28.3	10.5		
	2930	VORO	3	S	0048.0	0055.0	7.0	55.0			
	3750	TYKW	45	C	0049.0	0051.4	6.0	32.0	10.0		
	3653	YUNN	5	S	0049.3	0051.6	4.1	15.0			
	2000	TYKW	5	S	0049.5	0051.5	5.5	20.0	8.0		
	2902	YUNN	5	S	0049.6	0051.4	3.5	31.0			
	2695	PENT	3	S	0049.8	0051.3	5.0	22.6	7.6		
	1000	TYKW	45	C	0050.0	0050.6	3.5U	25.0	1.5		INTERFERENCE
	9400	TYKW	5	S	0050.0	0051.3	4.0	12.0	6.0		
	9400	TYKW	30	PBI	0054.0		50.0	5.0	2.5		
	2840	PEKG	29	PBI	0054.0		14.0	5.5	3.0		
	2000	TYKW	30	PBI	0055.0		35.0	2.0	1.0		
	3750	TYKW	30	PBI	0055.0		45.0	4.0	2.0		
	3750	TYKW	5	S	0059.0	0103.0	20.0	3.0	1.5		
	9400	TYKW	5	S	0059.0	0104.0	25.0	4.0	2.0		
	2000	TYKW	5	S	0100.0	0105.0	20.0	1.5	0.7		
	410	LEAR	8	S	0104.5	0104.6	.5	30.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0104.6	0104.8	.2	11.0			QL=6 ST=2 TYP=3
	3750	TYKW	45	C	0153.0	0159.0	10.0	15.0	7.0		
	2000	TYKW	21	GRF	0153.0	0210.0	150.0	4.0	2.0		
	4995	LEAR	4	S/F	0153.3	0153.8	11.3	16.0			QL=6 ST=2 TYP=3
	8800	LEAR	4	S/F	0153.3	0153.8	12.3	13.0			QL=6 ST=2 TYP=3
	9400	TYKW	45	C	0153.5	0153.8	14.5	9.0	4.0		
	2695	LEAR	4	S/F	0153.6	0158.1	5.5	7.0			QL=6 ST=2 TYP=3
	15400	LEAR	4	S/F	0153.8	0159.6	11.3	18.0			QL=5 ST=2 TYP=3
	2000	TYKW	5	S	0154.0	0154.7	2.0	1.5	0.5		
	2000	TYKW	5	S	0157.0	0159.3	10.0	2.0	1.0		
	3750	TYKW	30	PBI	0203.0		135.0	6.0	3.0		
	9400	TYKW	29	PBI	0208.0		15.0	3.0	1.5		
	2000	TYKW	20	GRF	0250.0	0313.0	80.0	2.0	1.0		
	3750	TYKW	20	GRF	0250.0	0326.0	80.0	3.0	1.5		

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
18	3750	TYKW	21	GRF	0435.0	0515.0	155.0	6.0	3.0		
	2000	TYKW	21	GRF	0435.0	0520.0	140.0	4.0	2.0		
	3750	TYKW	5	S	0438.0	0440.2	5.0	42.0	9.0		
	8800	ATHN	47	GB	0438.0	0440.5	4.5	210.0			QL=6 ST=2 TYP=5
	1415	ATHN	47	GB	0438.1	0440.6	4.5	63.0			QL=6 ST=2 TYP=5
	2695	ATHN	47	GB	0438.1	0440.6	4.5	51.0			QL=6 ST=2 TYP=5
	1000	TYKW	5	S	0439.0	0440.2	1.5	13.0	2.0		
	2840	PEKG	3	S	0439.0	0440.2	5.0	35.7	20.4		
	9395	PEKG	3	S	0439.0	0440.2	8.0	123.2	16.5		
	2000	TYKW	45	C	0439.0	0440.6	5.0	16.0	5.0		
	3653	YUNN	5	S	0439.3	0440.2	4.4	57.0			
	2902	YUNN	5	S	0439.4	0440.1	4.5	39.0			
	9400	TYKW	5	S	0439.5	0440.2	3.5	122.0	27.0		
	4995	LEAR	47	GB	0439.6	0440.1	1.5	63.0			QL=6 ST=2 TYP=5
	8800	LEAR	47	GB	0439.6	0440.1	2.2	130.0			QL=6 ST=2 TYP=5
	15400	LEAR	47	GB	0439.8	0440.1	2.5	110.0			QL=6 ST=2 TYP=5
	2695	LEAR	8	S	0440.0	0440.1	.8	22.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0440.0	0440.1	.3	26.0			QL=6 ST=2 TYP=3
	3750	TYKW	30	PBI	0443.0		20.0	4.0	2.0		
	9400	TYKW	29	PBI	0443.0		80.0	6.0	3.0		
	2000	TYKW	29	PBI	0444.0		10.0	2.0	1.0		
	3750	TYKW	5	S	0445.0	0446.7	4.0	1.5	0.5		
	245	LEAR	8	S	0450.1	0450.5	1.0	27.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0450.3	0450.5	.5	8.0			QL=6 ST=2 TYP=3
	650	GORK	22	GRF	0503.0E	0505.0	39.9D	9.5			
	100	HIRA	41	F	0536.4	0538.5	2.5	310.0			
	610	LEAR	8	S	0537.8	0537.8	.3	19.0			QL=6 ST=2 TYP=3
	100	HIRA	46	C	0714.8	0715.0	1.4	780.0	240.0		
	100	GORK	46	C	0715.0	0715.4	1.1	120.0D			
	204	IZMI	4	S/F	0715.0	0715.5	1.0	117.0	70.0		
	100	GORK			0715.0	0715.8		120.0D			
	245	LEAR	8	S	0715.1	0715.3	.4	17.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0715.1	0715.3	.4	17.0			QL=6 ST=2 TYP=3
	29	UPIC	2	S/F	0715.1	0715.3	.9				
	113	POTS	4	S/F	0715.3	0715.4	.7	500.0	100.0		III
	33	UPIC	4	S/F	0715.3	0715.9	.8				
	1470	POTS	29	PBI	0805.0	0807.3	255.0	14.0			
	1470	POTS			0805.0	0808.5		13.0			
	3653	YUNN	5	S	0805.9	0807.2	6.0	109.0			
	3750	TYKW	45	C	0806.0	0807.4	7.0	76.0	14.0		
	2000	TYKW	45	C	0806.0	0807.4	6.0	26.0	10.0		
	9400	TYKW	45	C	0806.0	0810.4	7.0	15.0	7.0		
	6100	KISV	4	S/F	0806.1	0810.4	6.0	16.0			
	2902	YUNN	45	C	0806.2	0807.6	11.0	117.0			
	2950	GORK	4	S/F	0806.2	0807.8	5.3	106.0			
	3100	CRIM	3	S	0806.4	0807.5	6.0	125.0	40.0		
	3000	POTS	29	PBI	0806.5	0807.5	259.0	90.0			
	3100	BERN	46	C	0806.6	0807.3	9.0	227.0			
	2695	ATHN	47	GB	0806.6	0807.8	9.0	86.0			QL=6 ST=2 TYP=5
	2695	LEAR	47	GB	0806.6	0807.8	7.5	80.0			QL=6 ST=2 TYP=5
	5200	BERN	4	S/F	0806.6	0810.5	9.0	36.0			
	1415	ATHN	4	S/F	0806.6	0810.6	9.0	19.0			QL=6 ST=2 TYP=3
	8800	ATHN	4	S/F	0806.6	0810.6	9.0	27.0			QL=6 ST=2 TYP=3
	9500	POTS	29	PBI	0806.7	0910.4	73.0	14.0			
	9100	GORK	20	GRF	0806.8	0810.4	212.0	17.0			
	2650	DWIN	4	S/F	0807.0	0807.0	5.0	80.0	10.0		
	1000	TYKW	45	C	0807.0	0808.6	2.5	6.0	1.5		
	3000	IZMI	7	C	0807.0	0808.0	6.0	114.0	55.0		
	1415	LEAR	4	S/F	0807.1	0807.3	6.4	24.0			QL=6 ST=2 TYP=3
	950	GORK	20	GRF	0807.1	0808.6	7.6	7.0			
	4995	LEAR	4	S/F	0808.1	0809.1	6.0	10.0			QL=6 ST=2 TYP=3
	930	BORD	8	S	0808.6	0808.6	.2	15.0	2.0		
	8800	LEAR	4	S/F	0810.1	0810.3	3.4	11.0			QL=6 ST=2 TYP=3
	2950	GORK	29	PBI	0811.1	0811.5	46.2	44.6			
	2000	TYKW	29	PBI	0812.0		10.0D	5.0	4.0D		
	6100	KISV	29	PBI	0812.0	0812.0	36.0	8.0			
	3100	CRIM	29	PBI	0812.4	0812.4	60.0	10.0	3.0		
	3750	TYKW	29	PBI	0813.0		15.0D	5.0	4.0D		
	9400	TYKW	29	PBI	0813.0		10.0D	6.0	5.0D		
	29	UPIC	4	S/F	1036.6	1037.0	.9				
	430	KRAK	42	SER	1037.7	1041.0	4.7	14.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
18	810	KRAK	8	S	1037.8	1037.8	.1	12.0			
	9100	GORK	20	GRF	1107.5	1122.1	45.7	10.0			
	430	KRAK	8	S	1118.4	1118.5	.2	22.0			
	33	UPIC	4	S/F	1154.2	1154.2	.5				
	29	UPIC	4	S/F	1154.2	1154.4	.3				
	2800	OTTA	21	GRF	1330.0	1510.0	165.0	3.6	1.8		
	234	POTS	8	S	1358.0	1358.0	.1	275.0	90.0		
	3000	POTS			1358.0	1417.5		6.0			
	2800	OTTA			1407.0		12.0D	5.0			
	1470	POTS	20	GRF	1413.0	1418.5	10.0	2.6			
	9400	HUAN	20	GRF	1414.5	1418.8	15.0	6.7	3.1		0
	2800	OTTA	1	S	1548.0	1550.0	4.0	1.6	1.2		
	2800	OTTA	21	GRF	1815.0	1910.0	105.0	4.8	2.2		
	2800	OTTA	2	S/F	1852.0	1852.5	1.5	8.8	4.0		
19	410	LEAR	43	NS	0256.5	0259.5	318.8	22.0			QL=6 ST=2 TYP=1
	200	HIRA	43	NS	0408.0	0546.0	300.0D	10.0	5.0		WR
	260	ONDR	44	NS	0711.0E		470.0D				
	204	IZMI	43	NS	1000.0		120.0	130.0			
	430	KRAK	43	NS	1011.3	1011.6	229.0D	48.0			
	127	TORN	43	NS	1020.0		160.0D				V=1
	200	HIRA	44	NS	2043.0E	0005.0	400.0D	10.0	6.0		MR
	245	LEAR	43	NS	2244.0	0600.1	695.0D	44.0			QL=6 ST=2 TYP=1
	3750	TYKW	21	GRF	0130.0	0200.0	165.0	3.0	1.5		
	410	LEAR	8	S	0206.6	0206.8	.2	16.0			QL=6 ST=2 TYP=3
	100	HIRA	46	C	0218.3	0218.6	.7	510.0	165.0		
	3750	TYKW	20	GRF	0230.0	0310.0	100.0	2.0	1.0		
	2000	TYKW	20	GRF	0230.0	0310.0	110.0	2.0	1.0		
	410	LEAR	8	S	0252.1	0252.3	.4	37.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0433.6	0433.8	.2	42.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0433.6	0433.8	.2	5.0			QL=6 ST=2 TYP=3
	610	LEAR	8	S	0435.3	0435.5	.5	23.0			QL=6 ST=2 TYP=3
	245	LEAR	47	GB	0435.3	0435.5	.5	66.0			QL=6 ST=2 TYP=5
	410	LEAR	8	S	0435.3	0435.6	.5	21.0			QL=6 ST=2 TYP=3
	650	GORK	22	GRF	0517.0E	0624.0	242.0D	6.5			
	3750	TYKW	20	GRF	0535.0	0623.0	130.0	3.0	1.5		
	9400	TYKW	21	GRF	0610.0	0623.0	30.0	4.0	2.0		
	9100	GORK	20	GRF	0611.8	0615.8	41.0	9.0			
	9400	TYKW	5	S	0615.5	0616.1	1.5	4.0	1.0		
	650	GORK	22	GRF	0946.1	1106.0	109.9	5.0			
	410	LEAR	8	S	1011.3	1012.0	1.0	29.0			QL=6 ST=2 TYP=3
	430	KRAK			1011.3	1112.0		54.0			
	810	KRAK	8	S	1024.2	1024.3	.3	3.0			
	9100	GORK	20	GRF	1030.6	1057.0	62.4	13.0			
	810	KRAK	8	S	1031.8	1031.8	.1	4.0			
	2800	OTTA	20	GRF	1200.0	1300.0	110.0	4.6	3.2		
	2800	OTTA	20	GRF	1420.0	1515.0	90.0	2.4	1.4		
	536	ONDR	2	S/F	1421.0	1422.5	2.5	8.0			
	930	BORD	46	C	1421.7	1422.4	1.1	23.0	6.0		
	2800	OTTA	240	AR	1637.0	1700.0	23.0	2.0	1.0		
	2800	OTTA	8	S	1637.8	1638.0	.8	1.6	.8		
	3750	TYKW	21	GRF	2305.0	0010.0	205.0	3.0	1.5		
	410	LEAR	8	S	2306.0	2306.1	.1	25.0			QL=6 ST=2 TYP=3
20	410	LEAR	43	NS	0202.1	0223.0	40.7	28.0			QL=6 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	62.0			
	260	ONDR	44	NS	0730.0E		454.0D				
	245	SGMR	43	NS	1620.0	1910.8	374.0D	160.0			QL=2 ST=2 TYP=1
	200	HIRA	44	NS	2041.0E	2312.0	730.0D	55.0	15.0		MR
	245	LEAR	43	NS	2251.0	2323.8	687.0D	150.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		6.0		
	3750	TYKW	21	GRF	0040.0	0102.0	105.0	2.0	1.0		
	3750	TYKW	5	S	0128.0	0129.3	3.0	4.0	2.0		
	3750	TYKW	29	PBI	0131.0		20.0	1.5	0.7		
	3750	TYKW	21	GRF	0240.0	0305.0	85.0	3.0	1.5		
	3750	TYKW	5	S	0252.0	0254.1	8.0	3.0	1.0		
	3750	TYKW	20	GRF	0330.0	0340.0	30.0	2.0	1.0		
	2000	TYKW	20	GRF	0330.0	0340.0	40.0	2.0	1.0		
	3750	TYKW	20	GRF	0422.0	0424.0	30.0	2.0	1.0		
	3750	TYKW	21	GRF	0500.0	0555.0	140.0	4.0	2.0		
	650	GORK	22	GRF	0503.0E	0533.5	342.0D	3.0			

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
20	245	LEAR	47	GB	0504.6	0505.0	1.2	150.0			QL=6 ST=2 TYP=5
	2000	TYKW	20	GRF	0520.0	0555.0	80.0	2.0	1.0		
	3750	TYKW	45	C	0523.0	0526.8	5.0	5.0	2.0		
	3750	TYKW	29	PBI	0528.0		15.0	2.0	1.0		
	9400	TYKW	20	GRF	0530.0	0550.0	80.0	4.0	2.0		
	2695	LEAR	8	S	0722.8	0723.3	.5	6.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0722.8	0723.3	.5	10.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0722.8	0723.3	.8	30.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0722.8	0723.3	.5	20.0			QL=6 ST=2 TYP=3
	1415	LEAR	8	S	0722.8	0723.3	.5	4.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0731.1	0731.3	.5	8.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0731.1	0731.3	.5	18.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0731.1	0731.3	.5	27.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0842.5	0842.5	.1	9.0			
	430	KRAK	2	S/F	0913.0	0913.3	.5	15.0	4.0		
	430	KRAK	42	SER	0956.0	1015.7	23.5	15.0			
	234	POTS	42	SER	1006.7	1006.8	9.2	165.0	1.0		
	6100	KISV	2	S/F	1210.3	1210.7	1.5	11.0			
	430	KRAK	42	SER	1213.0	1315.0	100.0	61.0			
	430	KRAK			1213.0	1322.8		69.0			
	2800	OTTA	2	S/F	1712.8	1713.5	1.0	3.4	1.2		
21	204	IZMI	43	NS	0600.0		360.0	40.0			
	260	ONDR	44	NS	0708.0E		478.0D				
	245	SGMR	43	NS	1105.0						QL=2 ST=3 TYP=1
	127	TORN	44	NS	1130.0E		90.0D				V=0
	200	HIRA	44	NS	2040.0E	0206.0	730.0D	25.0	5.0		MR
	245	PALE	43	NS	2110.0	0225.3	425.0D	160.0			QL=6 ST=2 TYP=1
	245	LEAR	43	NS	2244.0	0139.5	693.0D	130.0			QL=6 ST=2 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		15.0		
	410	LEAR	8	S	0134.0	0134.1	.1	8.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0134.0	0134.1	.3	25.0			QL=6 ST=2 TYP=3
	4995	LEAR	8	S	0226.8	0227.0	.3	7.0			QL=5 ST=2 TYP=3
	8800	LEAR	8	S	0226.8	0227.0	.5	9.0			QL=5 ST=2 TYP=3
	1415	LEAR	8	S	0226.8	0227.0	.3	3.0			QL=5 ST=2 TYP=3
	15400	LEAR	8	S	0226.8	0227.0	.3	28.0			QL=5 ST=2 TYP=3
	2695	LEAR	8	S	0226.8	0227.0	.3	7.0			QL=5 ST=2 TYP=3
	9400	TYKW	5	S	0310.0	0311.1	3.0	16.0	4.0		RAIN
	3750	TYKW	5	S	0310.0	0311.1	3.0	13.0	3.5		
	9395	PEKG	3	S	0310.0	0311.2	3.0	17.6	6.4		
	4995	LEAR	8	S	0310.1	0311.0	1.4	24.0			QL=6 ST=2 TYP=3
	15400	LEAR	8	S	0310.1	0311.1	2.0	22.0			QL=6 ST=2 TYP=3
	8800	LEAR	8	S	0310.1	0311.1	1.2	20.0			QL=6 ST=2 TYP=3
	2695	LEAR	8	S	0310.1	0311.1	2.0	15.0			QL=6 ST=2 TYP=3
	3750	TYKW	29	PBI	0313.0		15.0	2.0	1.0		
	536	ONDR	8	S	0829.0	0830.0	2.0				
	430	KRAK	8	S	0829.7	0830.0	.5	134.0			
	810	KRAK	8	S	0829.8	0830.0	.3	9.0			
	410	LEAR	47	GB	0829.8	0830.0	.5	450.0			QL=6 ST=2 TYP=5
	610	LEAR	47	GB	0829.8	0830.0	.5	139.0			QL=6 ST=2 TYP=5
	430	KRAK	8	S	0841.7	0841.8	.2	35.0			
	430	KRAK	42	SER	1007.2	1127.0	221.0	23.0			
	2800	OTTA	20	GRF	1527.0	1529.0	25.0	5.0	2.0		
	2800	OTTA	32	ABS	1605.0	1715.0	115.0	-2.6	-1.3		
	2800	OTTA	1	S	2016.5	2017.0	1.0	1.6	.8		
	4995	PALE	8	S	2016.6	2016.8	.4	13.0			QL=6 ST=2 TYP=3
	2800	OTTA	21	GRF	2105.0	2130.0	45.0	2.0	1.0		
	2800	OTTA	1	S	2122.8	2124.7	3.0	4.6	2.0		
	245	PALE	47	GB	2150.5	2150.6	.3	460.0			QL=6 ST=2 TYP=5
	4995	LEAR	8	S	2310.3	2310.8	1.0	9.0			QL=5 ST=2 TYP=3
	15400	LEAR	8	S	2310.3	2310.8	1.0	26.0			QL=5 ST=2 TYP=3
	2695	LEAR	8	S	2310.3	2310.8	1.0	6.0			QL=5 ST=2 TYP=3
	8800	LEAR	8	S	2310.3	2310.8	1.0	16.0			QL=5 ST=2 TYP=3
	1415	LEAR	8	S	2310.3	2310.8	1.0	8.0			QL=5 ST=2 TYP=3
22	410	LEAR	43	NS	0119.0	0130.3	80.0	26.0			QL=6 ST=2 TYP=1
	204	IZMI	43	NS	0600.0		360.0	20.0			
	260	ONDR	44	NS	0703.0E		483.0D				
	127	TORN	44	NS	0800.0E	1146.5	420.0D	150.0	2.0		V=1
	245	SGMR	43	NS	1120.0	1417.1	676.0D	119.0			QL=2 ST=2 TYP=1
	245	PALE	44	NS	2258.0E	0030.3	192.0D	54.0			QL=5 ST=2 TYP=1

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Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
22	208	VORO	44	NS	2300.0E		240.0D		8.0		
	3750	TYKW	21	GRF	0120.0	0130.0	50.0	1.5	0.7		
	3750	TYKW	5	S	0156.0	0156.8	2.0	4.0	1.5		
	3750	TYKW	29	PBI	0158.0		10.0	1.0	0.5		
	3750	TYKW	45	C	0244.8	0245.8	2.2	8.0	3.0		
	9400	TYKW	5	S	0245.0	0245.8	2.0	11.0	4.0		
	4995	LEAR	8	S	0245.0	0245.8	2.0	11.0			QL=6 ST=3 TYP=3
	8800	LEAR	4	S/F	0245.1	0245.8	2.7	13.0			QL=6 ST=2 TYP=3
	9400	TYKW	29	PBI	0247.0		15.0	3.0	1.5		
	3750	TYKW	29	PBI	0247.0		8.0	1.5	0.7		
	3750	TYKW	20	GRF	0309.0	0315.0	30.0	1.5	0.7		
	3750	TYKW	20	GRF	0341.0	0356.0	120.0	2.0	1.0		
	2000	TYKW	20	GRF	0342.0	0344.0	70.0	1.5	0.7		
	127	TORN	45	C	1035.0		10.5				
	930	BORD	41	F	1631.2	1631.4	.4	13.0	2.0		
	2800	OTTA	20	GRF	2000.0	2025.0	120.0	2.4	1.6		
23	245	LEAR	43	NS	0030.0	0959.8	586.0D	50.0			QL=6 ST=2 TYP=1
	260	ONDR	44	NS	0700.0E		487.0D				
	127	TORN	43	NS	0800.0		440.0		1.0		V=1
	33	UPIC	43	NS	0853.1		301.2				
	29	UPIC	43	NS	0853.1	1348.7	301.2				
	245	SGMR	43	NS	1103.0	1302.8	694.0D	67.0			QL=2 ST=2 TYP=1
	245	LEAR	43	NS	2245.0	1009.3	690.0D	78.0			QL=6 ST=2 TYP=1
	2000	TYKW	20	GRF	0120.0	0130.0	80.0	2.0	1.0		
	3750	TYKW	20	GRF	0120.0	0131.0	80.0	3.0	1.5		
	9400	TYKW	20	GRF	0120.0	0134.0	50.0	3.0	1.5		
	1000	TYKW	5	S	0125.3	0125.7	1.5	6.0	1.5		
	410	LEAR	8	S	0550.5	0551.1	.6	10.0			QL=6 ST=2 TYP=3
	1000	TYKW	5	S	0724.0	0724.3	1.0	3.0	1.0		
	33	UPIC	46	C	1347.5		5.6				
	113	POTS	42	SER	1347.5	1348.1	4.7	3200.0	20.0		III
	29	UPIC	46	C	1348.1	1348.7	5.1				
	2800	OTTA	1	S	1852.0	1852.5	1.5	7.0	1.8		
	245	SGMR	8	S	1852.1	1852.6	1.2	460.0			QL=2 ST=2 TYP=3
	410	SGMR	49	GB	1852.3	1852.6	1.0	510.0			QL=6 ST=2 TYP=6
	2695	SGMR	8	S	1852.3	1852.6	1.0	30.0			QL=6 ST=2 TYP=3
	4995	SGMR	8	S	1852.3	1852.6	1.0	30.0			QL=6 ST=2 TYP=3
	610	SGMR	49	GB	1852.3	1852.6	1.0	580.0			QL=6 ST=2 TYP=6
	1415	SGMR	8	S	1852.3	1852.6	1.0	39.0			QL=6 ST=2 TYP=3
	245	PALE	49	GB	1852.6	1853.0	1.0	670.0			QL=6 ST=2 TYP=6
	410	PALE	49	GB	1852.6	1853.0	1.2	560.0			QL=6 ST=2 TYP=6
	1415	PALE	8	S	1852.6	1853.1	.5	30.0			QL=6 ST=2 TYP=3
	610	PALE	49	GB	1852.8	1853.1	.8	580.0			QL=6 ST=2 TYP=6
	4995	PALE	8	S	1853.0	1853.1	.3	15.0			QL=6 ST=2 TYP=3
	100	HIRA	42	SER	2153.0	2154.5	17.0	3000.0			
	2695	PENT	20	GRF	2255.0	2330.0	85.0	2.2	1.1		
	200	HIRA	41	F	2300.4	2300.7	2.1	290.0			WR
	100	HIRA	46	C	2301.0U	2302.0	2.1U	10000.0D	1800.0D		
	245	LEAR	47	GB	2301.8	2301.8	.3	460.0			QL=6 ST=2 TYP=5
	100	HIRA	46	C	2339.2	2340.0	1.7	2600.0	165.0		
24	260	ONDR	44	NS	0710.0E		480.0D				
	127	TORN	43	NS	0926.0	1027.1	128.0	30.0	1.0		V=0
	245	SGMR	43	NS	1103.0	1335.0	696.0D	30.0			QL=2 ST=3 TYP=1
	208	VORO	44	NS	2300.0E		240.0D		3.0		
	2000	TYKW	21	GRF	0050.0	0120.0	110.0	2.0	1.0		
	3750	TYKW	20	GRF	0050.0	0124.0	110.0	2.0	1.0		
	2000	TYKW	5	S	0051.0	0052.0	3.0	1.5	0.5		
	9395	PEKG	3	S	0136.0	0136.9	4.0	12.6	9.9		
	410	LEAR	8	S	0745.6	0745.6	.2	11.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	1008.1	1008.1	.2	11.0			QL=6 ST=2 TYP=3
	930	BORD	41	F	1106.4	1106.4	.3	17.0	1.0		
	245	SGMR	8	S	1245.3	1245.6	.5	31.0			QL=6 ST=2 TYP=3
	33	UPIC	42	SER	1412.1	1430.8	30.0				
	29	UPIC	42	SER	1412.5	1430.8	29.3				
	2800	OTTA	20	GRF	1730.0	1733.0	40.0	2.8	1.0		
25	245	LEAR	43	NS	0402.8	0501.6	371.2	100.0			QL=6 ST=2 TYP=1
	33	UPIC	44	NS	0530.0E		660.0D				
	410	LEAR	43	NS	0530.1	0532.3	100.9	17.0			QL=6 ST=2 TYP=1

SOLAR RADIO EMISSION
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MARCH 1983

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
25	204	IZMI	43	NS	0600.0		150.0	30.0			
	200	HIRA	43	NS	0605.0	0630.0	170.0D	15.0	10.0		0
	260	ONDR	44	NS	0700.0E		490.0D				
	127	TORN	43	NS	0728.0	0810.3	89.0	20.0	1.0		V=1
	29	UPIC	44	NS	0750.0E		520.0D				
	200	HIRA	44	NS	2034.0E	2133.0	740.0D	10.0	5.0		0
	245	LEAR	43	NS	2246.0	2336.6	687.0D	37.0			QL=6 ST=2 TYP=1
	245	LEAR	8	S	0031.1	0031.3	.2	11.0			QL=6 ST=2 TYP=3
	9400	TYKW	20	GRF	0040.0	0050.0	30.0	3.0	1.5		
	245	PALE	47	GB	0208.6	0208.8	.5	110.0			QL=6 ST=2 TYP=5
	3750	TYKW	45	C	0240.0	0251.6	17.0	7.0	1.5D		
	1000	TYKW	45	C	0245.0	0247.3	10.0	4.0	1.0		
	2000	TYKW	45	C	0245.0	0252.0U	9.0	4.0	1.5D		
	500	HIRA	7	C	0247.0	0247.3	2.0	4.0	3.0		0
	245	LEAR	4	S/F	0247.1	0248.8	3.7	9.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0820.0	0820.2	.3	12.0			
	810	KRAK	46	C	1031.3	1047.0	21.5	42.0	5.0		
	2800	OTTA	240	R	1320.0	1330.0	10.0	2.0	.8		
	2800	OTTA	21	GRF	1415.0	1445.0	260.0	6.8	2.3		
	930	BORD	40	F	1431.0	1439.8	14.0	22.0	5.0		
	2800	OTTA	4	S/F	1433.0	1437.0	9.5	10.0	3.4		
	3000	POTS	40	F	1435.0	1437.8	7.0	8.0			
	536	ONDR	41	F	1435.0	1438.0	5.0	12.0			
	1470	POTS	40	F	1435.0	1438.0	6.5	11.0			
	1415	ATHN	4	S/F	1435.1	1435.6	2.7	16.0			QL=6 ST=2 TYP=3
	4995	SGMR	8	S	1435.1	1435.8	.7	16.0			QL=6 ST=2 TYP=3
	2695	ATHN	4	S/F	1435.1	1437.3	5.0	11.0			QL=6 ST=2 TYP=3
	1415	SGMR	8	S	1435.3	1435.3	.5	20.0			QL=6 ST=2 TYP=3
	410	SGMR	47	GB	1435.3	1435.6	4.2	31.0			QL=6 ST=2 TYP=5
	245	SGMR	4	S/F	1435.3	1435.6	5.5	660.0			QL=2 ST=2 TYP=3
	113	POTS	4	S/F	1435.4	1435.6	5.4	700.0	5.0		III/V
	410	PALE	8	S	2302.3	2302.3	.3	37.0			QL=6 ST=2 TYP=3
	410	PALE	8	S	2307.1	2307.5	.5	24.0			QL=6 ST=2 TYP=3
26	204	IZMI	43	NS	0600.0		270.0	10.0			
	260	ONDR	44	NS	0707.0E		483.0D				
	33	UPIC	43	NS	0741.4	1248.7	343.6				
	29	UPIC	43	NS	0741.6	1249.0	343.5				
	208	VORO	44	NS	2300.0E		240.0D		4.0		
	3750	TYKW	20	GRF	0215.0	0236.0	90.0	2.0	1.0		
	2000	TYKW	21	GRF	0215.0	0240.0	90.0	2.0	1.0		
	9400	TYKW	20	GRF	0230.0	0250.0	50.0	4.0	2.0		
	500	HIRA	42	SER	0232.6	0238.3	9.0	7.0			0
	2000	TYKW	45	C	0235.0	0236.4	3.0	10.0	3.0		
	1000	TYKW	45	C	0235.0	0236.7	9.0	5.0	1.0		
	1415	LEAR	4	S/F	0235.1	0236.5	3.0	10.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0235.1	0236.8	1.9	3.0			QL=6 ST=2 TYP=3
	610	LEAR	4	S/F	0235.1	0238.1	7.0	6.0			QL=6 ST=2 TYP=3
	3750	TYKW	21	GRF	0550.0	0615.0	100.0	2.0	1.0		
	950	GORK	1	S	0559.5	0603.5	6.1	7.0			
	4995	LEAR	4	S/F	0600.5	0604.5	4.8	3.0			QL=6 ST=2 TYP=3
	2695	LEAR	4	S/F	0600.5	0606.3	6.3	16.0			QL=6 ST=2 TYP=3
	2000	TYKW	45	C	0601.0	0604.6	4.0D	11.0	3.0D		
	610	LEAR	4	S/F	0601.3	0602.8	8.2	13.0			QL=6 ST=2 TYP=3
	650	GORK	40	F	0601.4	0603.6	8.1	36.0			
	650	GORK			0601.4	0607.4		23.0			
	9400	TYKW	20	GRF	0602.0	0615.0	35.0	3.0	1.5		
	2695	ATHN	8	S	0602.6	0603.3	1.0	11.0			QL=5 ST=2 TYP=3
	1415	LEAR	4	S/F	0602.6	0606.3	5.0	8.0			QL=6 ST=2 TYP=3
	410	LEAR	4	S/F	0602.6	0607.5	7.0	8.0			QL=6 ST=2 TYP=3
	500	HIRA	45	C	0602.7	0607.5	7.0	22.0	10.0		WR
	1000	TYKW	5	S	0603.0	0603.4	3.0	5.0	1.0		
	3750	TYKW	5	S	0603.0E	0604.0U	4.0D	2.0	0.7D		
	2950	GORK	1	S	0603.0	0603.3	2.3	4.5	2.0		
	930	BORD	41	F	0930.8	0930.9	.7	21.0	2.0		
	2800	OTTA	20	GRF	1445.0	1630.0	195.0	3.0	1.8		
27	245	LEAR	43	NS	0036.0	0941.8	577.0D	72.0			QL=6 ST=2 TYP=1
	3750	TYKW	5	S	0107.0	0107.4	1.0	1.5	0.5		
	245	LEAR	8	S	0823.3	0823.5	.3	28.0			QL=5 ST=2 TYP=3
	410	LEAR	8	S	0823.3	0823.5	.3	7.0			QL=5 ST=2 TYP=3

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1983

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
27	204	IZMI	5	S	0833.0	0833.5	.8	2800.0	300.0		
	33	UPIC	42	SER	0833.1	0833.3	10.8				
	234	POTS	4	S/F	0833.2	0833.3	.3	3900.0	1000.0		III
	29	UPIC	42	SER	0833.2	0833.4	10.8				
	113	POTS	8	S	0833.3	0833.4	.2	4200.0	1400.0		III
	113	POTS	4	S/F	0843.0	0843.5	.7	245.0	8.0		III
	245	LEAR	8	S	0843.0	0843.6	.8	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0846.3	0846.5	.3	26.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0846.3	0846.5	.3	10.0			QL=6 ST=2 TYP=3
	234	POTS	4	S/F	1327.3	1327.4	.3	140.0	5.0		III
	2800	OTTA	20	GRF	1830.0	1905.0	70.0	1.6	1.0		
28	430	KRAK	8	S	0923.2	0923.3	.2	18.0			
	127	TORN	42	SER	0935.3		5.5				
	1470	POTS	4	S/F	1018.3	1019.0	1.2	34.0			
	808	ONDR	8	S	1018.5	1018.5	1.0	22.0			
	810	KRAK	8	S	1018.5	1018.6	.5	21.0			
	430	KRAK	8	S	1018.5	1018.7	.3	5.0			
	930	BORD	46	C	1018.5	1018.8	1.0	55.0	4.0		
	2950	GORK	1	S	1018.5	1018.9	.6	7.6	3.8		
	950	GORK	2	S/F	1018.6	1018.8	.6	22.0			
	3000	POTS	8	S	1018.6	1018.8	.4	5.0			
	930	BORD	8	S	1157.2	1157.3	.2	25.0	2.0		
	930	BORD	41	F	1519.5	1520.0	.5	13.0	2.0		
	2800	OTTA	20	GRF	1520.0	1535.0	50.0	2.2	1.1		
29	204	IZMI	8	S	0737.5	0737.5	.1	500.0	200.0		
	3000	POTS	1	S	0912.5	0913.3	1.5	4.0			
	1415	LEAR	8	S	2311.8	2312.0	1.2	15.0			QL=5 ST=3 TYP=3
	245	LEAR	8	S	2335.3	2335.5	.3	11.0			QL=6 ST=2 TYP=3
30	3750	TYKW	20	GRF	0030.0	0044.0	80.0	1.5	0.7		
	245	LEAR	8	S	0128.3	0128.3	.2	19.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0700.5	0700.6	.1	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0727.1	0727.3	.2	13.0			QL=1 ST=2 TYP=3
	245	LEAR	8	S	0752.8	0752.8	.2	11.0			QL=1 ST=2 TYP=3
	430	KRAK	8	S	0901.5	0902.0	.5	38.0			
	245	LEAR	8	S	0913.8	0913.8	.2	33.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0953.1	0953.3	.2	16.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	2336.6	2337.1	1.5	25.0			QL=1 ST=2 TYP=3
	245	PALE	8	S	2336.6	2337.3	.7	31.0			QL=5 ST=2 TYP=3
	410	LEAR	8	S	2337.0	2337.3	.6	5.0			QL=6 ST=2 TYP=3
	245	PALE	47	GB	2345.5	2345.6	.3	81.0			QL=6 ST=2 TYP=5
31	245	LEAR	8	S	0047.6	0047.8	.2	22.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0151.5	0151.6	.1	13.0			QL=6 ST=2 TYP=3
	410	LEAR	8	S	0218.1	0218.1	.7	11.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0637.0	0637.1	.1	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0647.3	0647.5	.3	10.0			QL=6 ST=2 TYP=3
	245	LEAR	8	S	0710.8	0711.0	.3	30.0			QL=6 ST=2 TYP=3
	430	KRAK	8	S	0746.2	0746.4	.7	91.0			
	810	KRAK	8	S	0746.5	0746.5	.1	5.0			
	245	LEAR	8	S	0824.1	0824.3	.2	13.0			QL=6 ST=2 TYP=3
	430	KRAK	27	RF	0930.3	0937.5	29.5	14.0	7.0		
	260	ONDR	42	SER	0957.0	0957.0	23.0	7.0			
	245	LEAR	8	S	1003.8	1003.8	.2	40.0			QL=6 ST=2 TYP=3
	810	KRAK	8	S	1027.6	1027.6	.1	4.0			
	430	KRAK	8	S	1027.6	1027.7	.2	25.0			
	810	KRAK	8	S	1225.0	1225.0	.1	4.0			
	430	KRAK	42	SER	1228.3	1229.4	1.2	43.0			
	810	KRAK	8	S	1229.3	1229.3	.1	3.0			
	245	LEAR	8	S	2316.1	2316.1	.2	18.0			QL=6 ST=2 TYP=3

Reports are received routinely from the following observatories:

ATHN = Athens
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
DWIN = Dwingeloo
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
LEAR = Learmonth
MANI = Manila
NAGO = Nagoya
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PALE = Palehua
PEKG = Peking
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov

Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
33 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major

1A Simple 1A
3A Simple 2A
21A Simple 3A GRF
2A Simple 1AF
4A Simple 2AF
240 Rise only
240F Rise only F
24P Post Rise
24PF Post Rise F
16A Fall A
26F Fall F
27F Rise and Fall F
27AF Rise and Fall AF
31A Post Burst Decrease A
32A Absorption A
46F Complex F

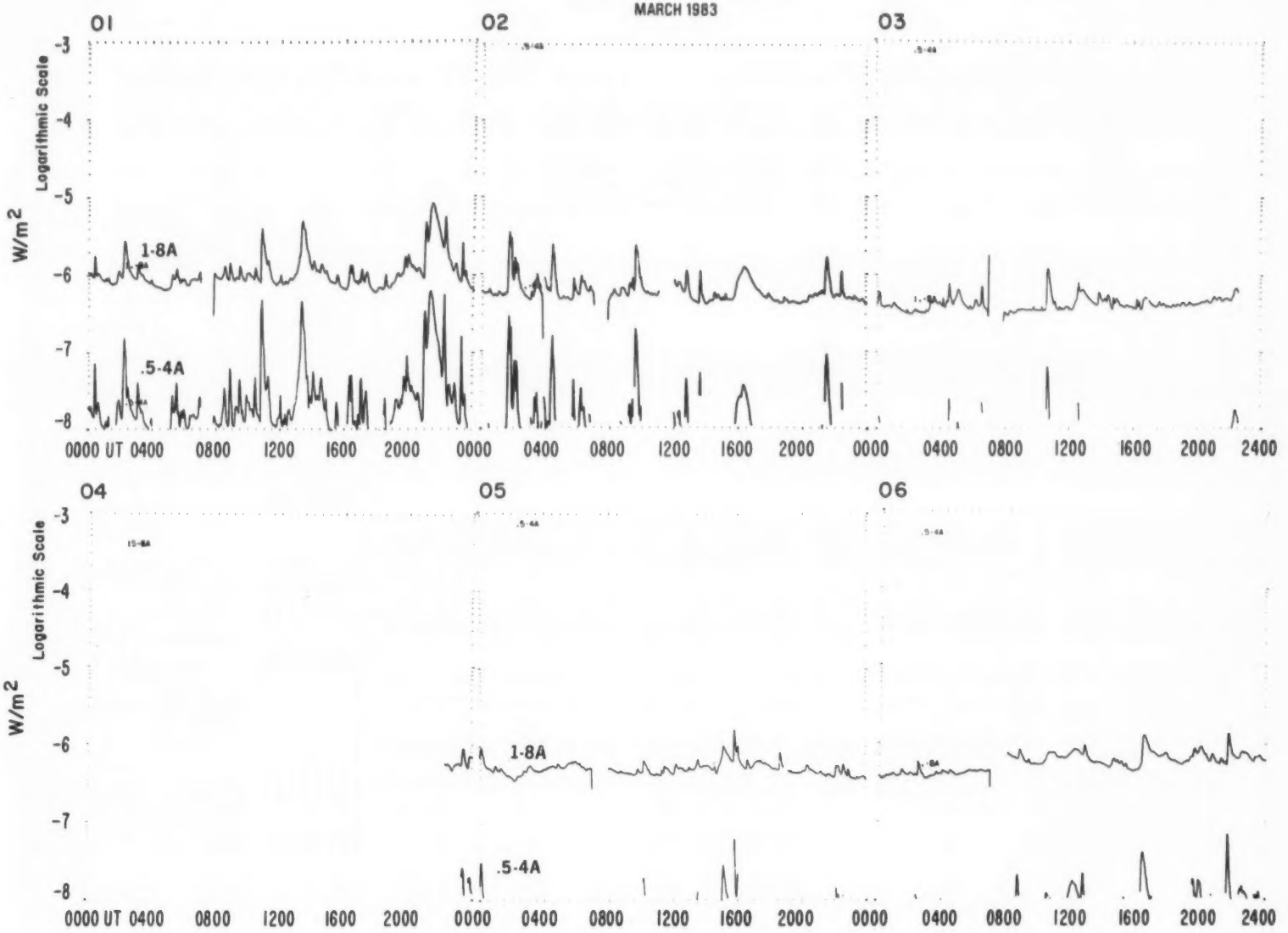
Remarks:

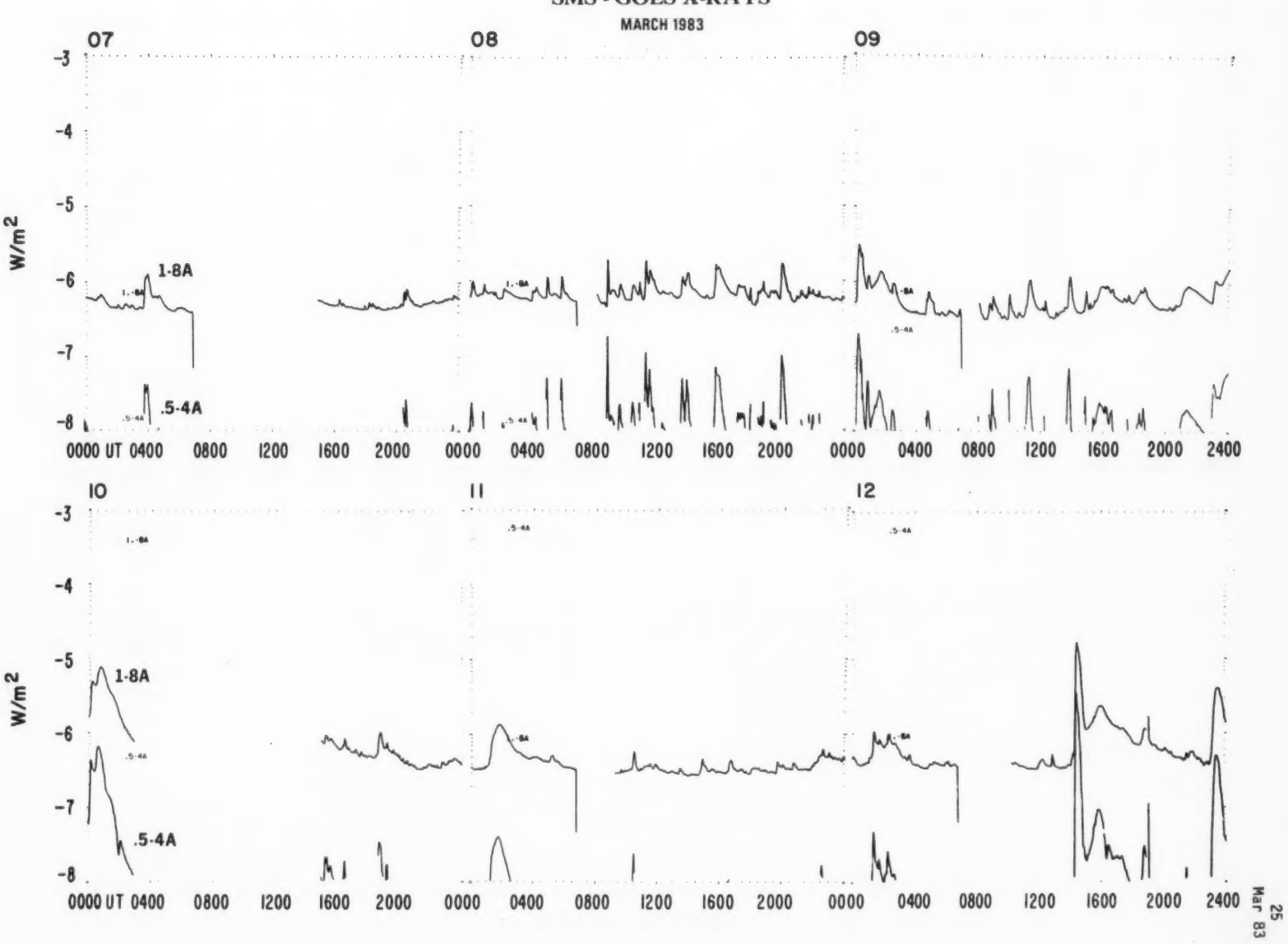
QL = Quality (1=poor to 6=excellent)
ST = Status (1=real time; 2=final; 3=correction; 4=deletion)
TYP= Type (1=noise storm;2=rise in base level;3=minor;4=group;5=major;6=major plus;7=Castelli U-type burst)

SMS - GOES X-RAYS

MARCH 1983

24 Mar 83




SMS - GOES X-RAYS
MARCH 1983
07
08
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W/m2
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.5-4A
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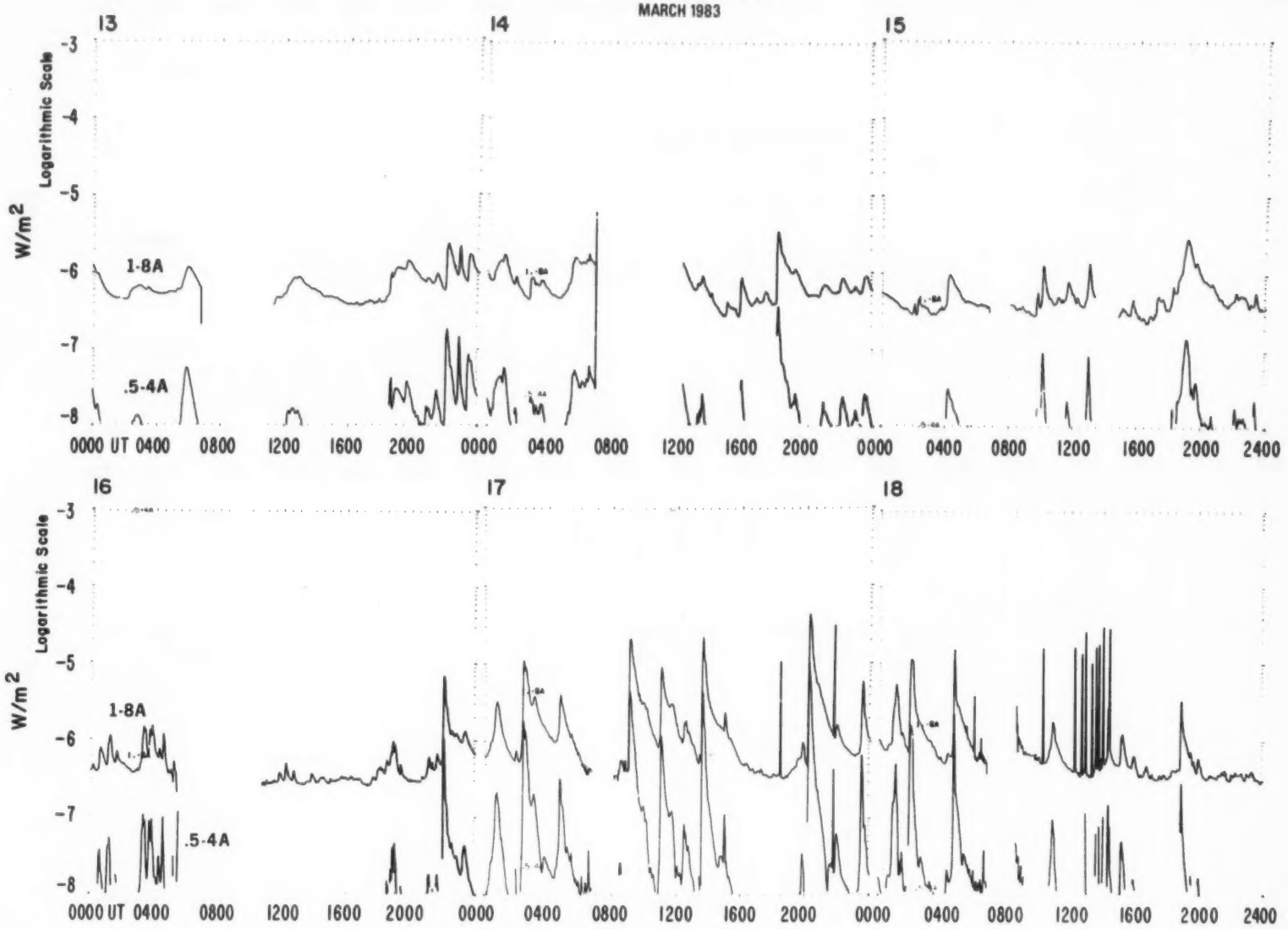
25 Mar 83

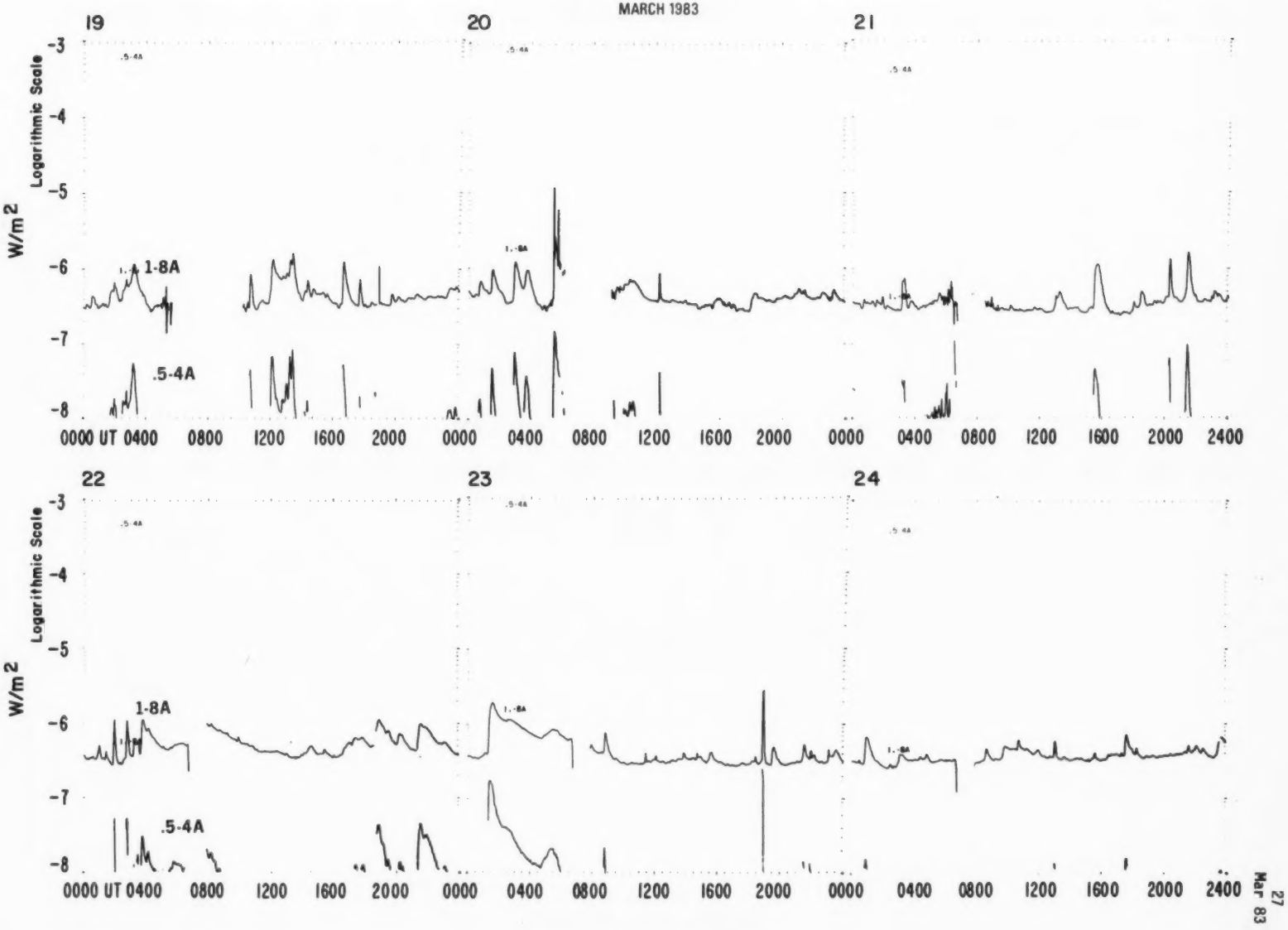
SMS - GOES X-RAYS

MARCH 1983



SMS - GOES X-RAYS

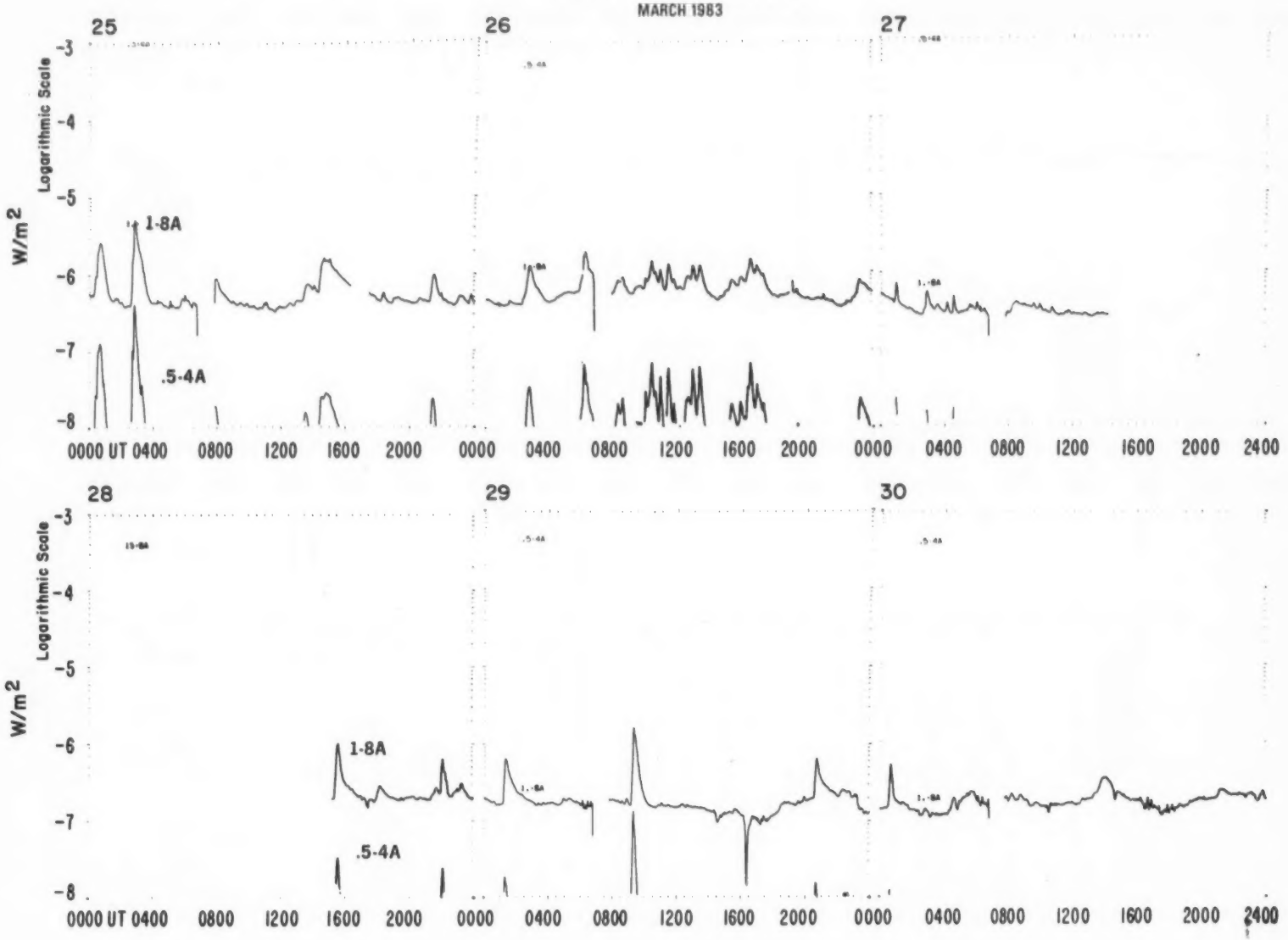
MARCH 1983



28 Mar 83

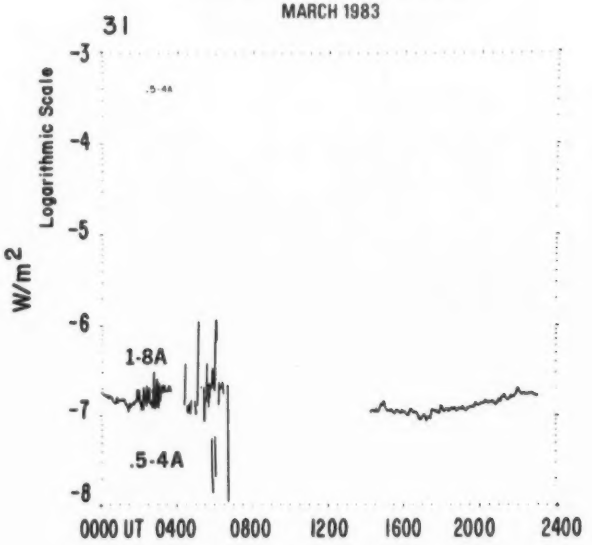
SMS - GOES X-RAYS

MARCH 1983



SMS - GOES X-RAYS

MARCH 1983



MASS EJECTIONS FROM THE SUN

MARCH 1983

Sta	Day	Observed UT Start	Max	End	Location RA°	R/R_o	Freq or Wavelength	Kind of Event
CULG	04	- 0713.0		0725.5			Meter	II Harmonic
WEIS	04	- 0713.3		0726.3			Meter	II Harmonic
CULG	04	0719.0		0743.4			Decimeter; meter	IV
WEND	04	1332	1346	1404	260	1.00-1.04	H-alpha	S
BLEN	06	0720.3		0729.7			Decimeter; meter	IV
VORO	08	0052 E	0057	0125 D	269	0.9	H-alpha	SP
WEIS	10	- 0850.4		0910.1			Meter	II
LEAR	10	- 0851.8		0901.8			Meter	II
WEND	10	1511	1518	1526	262	0.98-1.03	H-alpha	S
KHAR	14	1003 E		1020 D	068	1.00-1.05	H-alpha	S
KHAR	14	1015 E		1041 D	099	1.00	H-alpha	S
KHAR	14	1143 E		1203 D	097	1.00	H-alpha	S
KHAR	17	1059 E		1128 D	095	0.70	H-alpha	S
VORO	18	0131 E	0145	0211 D	345	0.6	H-alpha	SP
VORO	18	0209 E	0233	0256 D	195	0.6	H-alpha	SP
VORO	18	0215 E	0234	0254 D	040	0.5	H-alpha	SP
CULG	23	2045.5		2051.5			Meter	II U-shaped
CULG	25	- 0259.0		0314.0			Meter	II
LEAR	25	- 0259.3		0315.0			Meter	II
PALE	25	- 0302.1		0310.8			Meter	II
WEIS	25	1431.0		1449.6			Meter	II
BLEN	25	1434.0		1440.6			Decimeter; meter	IV

QUALIFIERS ON START, MAX AND END TIMES
D = event ended after tabulated time
E = event began before the tabulated time
U = uncertain time

TYPE OF EVENT
A = eruptive active region prominence
CB = coronal cloud bubble
D = coronal depletions
E = coronal enhancement
EL = coronal expanding loop
II = Type II radio burst
IVm = moving Type IV radio burst
Q = eruptive quiescent prominence
R = coronal ray or streamer
S = flare-surge if there is a known flare association
SP = flare-spray if there is a known flare association
* = movement may be caused by ionospheric refraction

REPORTING STATIONS
BLEN = Blelen
CULG = Culgoora
KHAR = Kharkov
LEAR = Learmonth
PALE = Palehua
VORO = Voroshilov
WEIS = Weissenau
WEND = Wendelstein

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ACTIVE REGIONS
CARRINGTON ROTATION 1728
(October 29 to November 25, 1982)

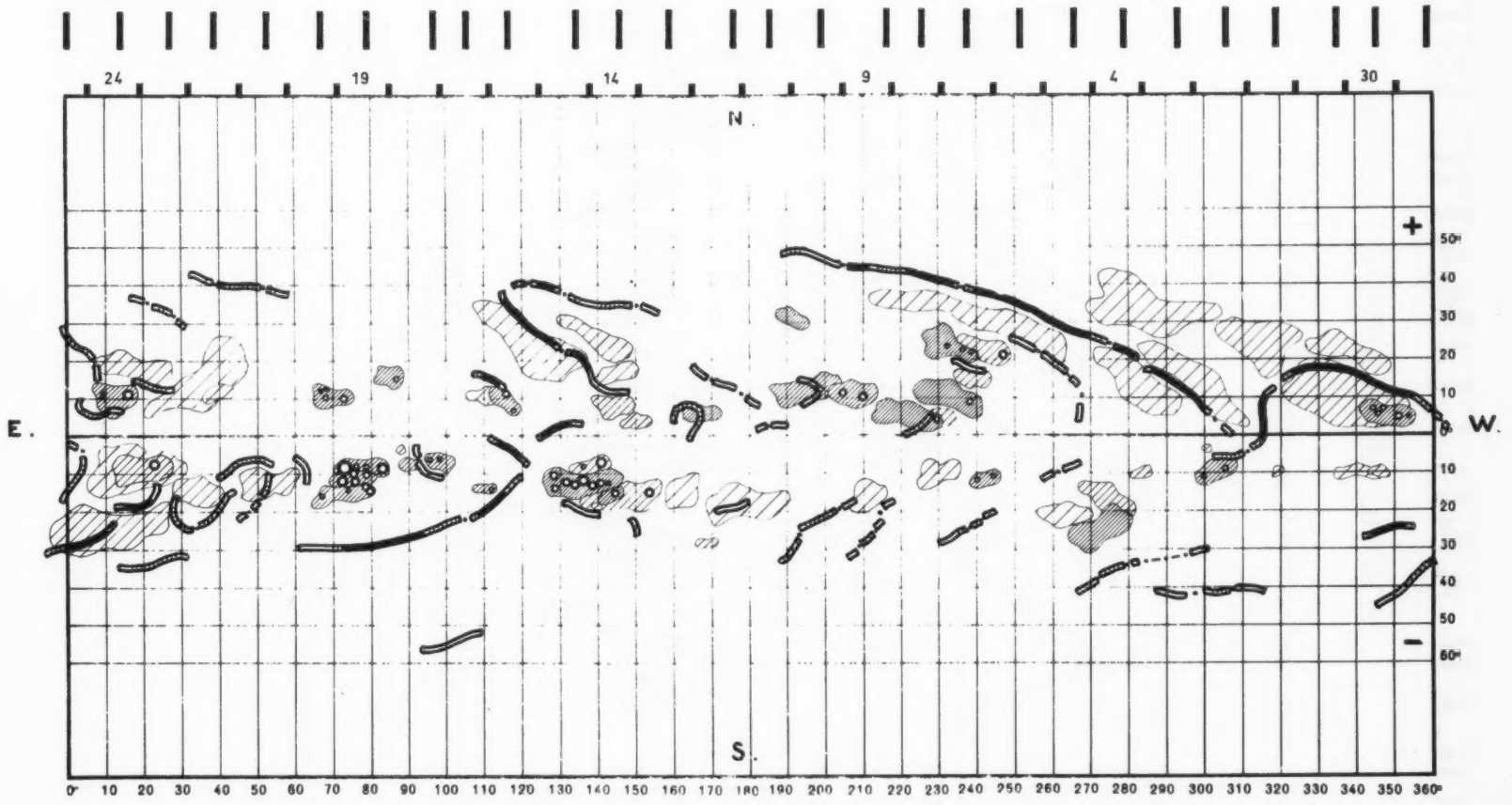
Region No.	Coordinates Lat.	Long.	IMP	Age at CMP (Days)	Spot-less Region	Region No. In Rotation 1727	Activity at West Limb
1	5°N	349	4	0	x		decreasing
2	10°S	346	1	-5	x		stable
3	10°S	340	1	>6	x		decreasing
4	23°N	339	1	>6	x		decreasing
5	10°N	338	1	>6	x	5-6	decreasing
6	25°N	315	1	>6	x	7	decreasing
7	9°S	303	2	-1			stable
8	10°S	283	1	-3	x		stable
9	16°S	275	1	>6	x	12	decreasing
10	24°S	273	1	>6	x		decreasing
11	11°S	243	2	0			dispersed
12	6°N	222	3	>6		18	decreasing
13	15°N	240	1	>6	x		dispersed
14	10°N	234	2	>6			dispersed
15	24°N	234	2	>6			decreasing
16	5°N	232	1	+4	x		dispersed
17	10°S	231	1	>6	x	20	dispersed
18	6°N	222	2	>6			decreasing
19	11°N	209	3	+3			decreasing
20	13°N	197	2	>6			decreasing
21	31°N	192	1	>6	x		dispersed
22	28°S	169	1	-1	x		decreasing
23	6°N	168	1	>6	x		dispersed
24	4°N	151	1	>6	x		decreasing
25	16°S	148	3	>6			decreasing
26	17°N	146	1	>6	x	33	dispersed
27	8°N	145	1	>6	x		dispersed
28	16°S	144	2	+1			decreasing
29	26°N	141	1	>6	x	32	dispersed
30	8°S	139	3	>6		35	decreasing
31	15°S	137	7	>6			decreasing
32	10°N	116	2	-5			(?)
33	14°S	110	2	+6			decreasing
34	6°S	98	2	+4			dispersed
35	7°S	91	1	-3	x		stable
36	16°N	85	2	-2			stable
37	8°S	79	5	0			decreasing
38	11°S	76	5	>6			decreasing
39	15°S	74	3	>6			decreasing
40	11°N	70	2	+2			decreasing
41	12°S	53	1	>6	x	42-44	dispersed
42	12°N	40	1	>6	x		dispersed
43	15°S	34	1	>6	x	49	decreasing
44	8°S	19	3	>6		57	decreasing
45	18°N	18	1	>6	x	50	dispersed
46	10°N	13	3	>6			decreasing
47	25°S	11	1	>6	x	54	decreasing

SYNOPTIC SOLAR MAP

CARRINGTON ROTATION 1728

OCTOBER 29 - NOVEMBER 25, 1982

MEUDON OBSERVATORY



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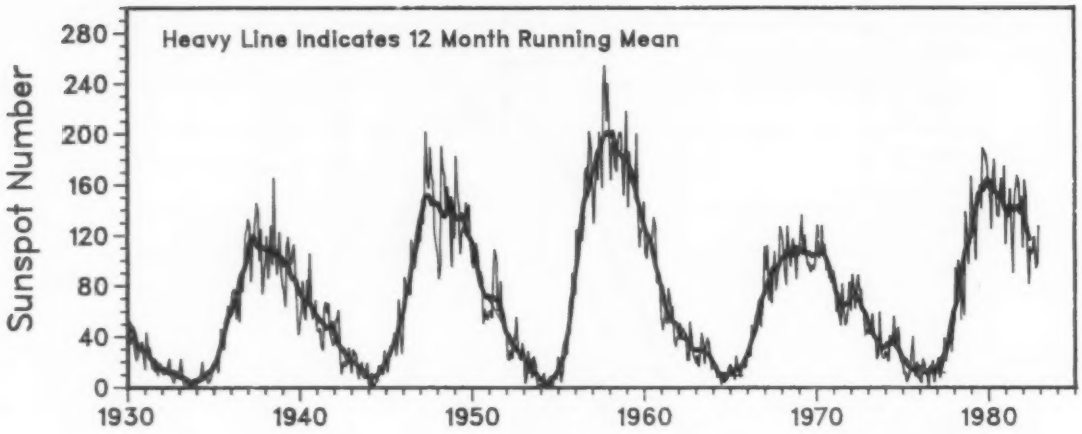
SOLAR AND CLIMATIC INDICES

MONTHLY MEAN SUNSPOT NUMBERS



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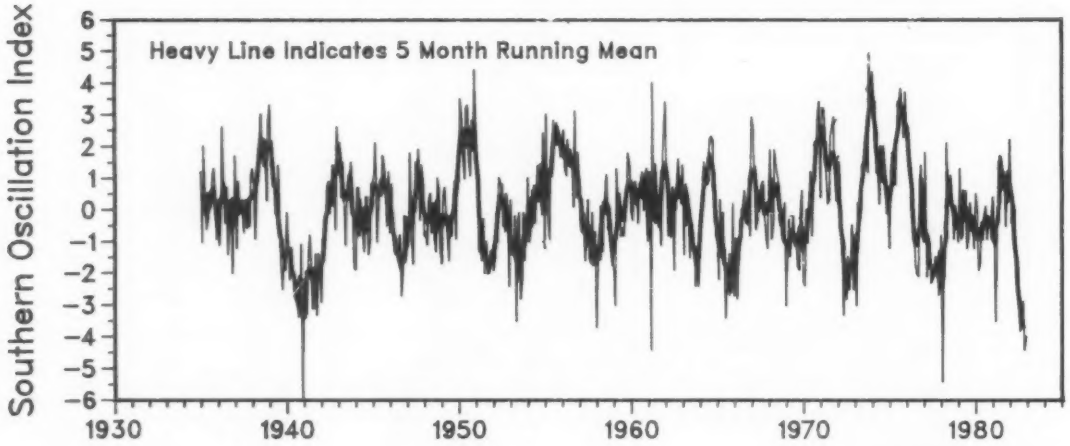

National Geophysical Data Center
D.S. Wilkinson

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